

Assessing and adjusting the 2000 Philippine census population count

Grace T. Cruz, Christian Joy P. Cruz & Maria Midea M. Kabamalan¹

University of the Philippines Population Institute

Background

This paper is an assessment of the 2000 and 2010 census as part of the data inputs for the “Stock and Flow Projections of Enrolment and Education Requirements for the K-12 Program” project commissioned by the Australian Aid for International Development (AusAID) to the Demographic Research and Development Foundation, Inc. (DRDF). The project, now on its third phase of implementation, requires an estimation of the yearly school-going population for the period 2001-2009 as a basis for evaluating the Department of Education’s (DepEd) performance for the said period.

Phase I of the project started in July 2011. Under this initial phase, we developed a stock and flow computer program to estimate the expected enrolment and the corresponding education requirements (e.g. classrooms, teachers, chairs, books) for the period SY2011-2012 to SY2022-2023. Estimates were done at the national level using the 2000 & 2007 census data and the official 2000-based population projections of the National Statistics Office. Education assumptions were provided by AusAID.

Phase II of the project was implemented in February, 2012. It expanded the data base for estimating the school-going population from census data (in Phase I) to include data from the vital registration system. Regional projections were also estimated to provide a basis for assessing regional education performance.

For Phase III of the project, we will update the data base using 2010 census data; update the vital registration data and expand the estimates to include school division level. Thus the education indicators will be estimated for the national, regional and division levels.

Assessing the 2000 and 2010 Census

Prior to interpolating the yearly population between the two census years 2000 and 2010, we first examined the accuracy of these census enumerations since they will be used as a basis for the estimates. A previous examination of various indicators suggests that census enumeration in the country is generally improving over time. An assessment of the of the various indicators for assessing age and sex reporting of the various census years indicates an overall declining level of error in age and sex reporting (Cruz et al., forthcoming). For example, age heaping is, “the tendency for respondents to report certain ages at the expense of others” (Hobbs in Siegel

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and Swanson, 2004: 136) and this can be measured using the Whipple's Index and Myers Blended Method. Age heaping happens when respondents for a household for instance do not have objective indicators of the timing of birth of the household members (e.g. birth certificate) during census interviews. This tendency to report some digit preferences results in the clustering of the population on certain preferred ages particularly those ending in 0 or 5. The Whipple's index declined from a high of 139 in 1970 to 109 in 2010 suggesting a reduction in age heaping over the last 40 years. Whipple's Index reflects preferences for or avoidance of particular terminal digits where values near 100 imply no preference for terminal digits 0 and 5 (Hobbs in Siegel and Swanson, 2004).

Although there are no direct indicators to measure completeness of census enumeration, the generally improving reports in key demographic variables such as age and sex seem to suggest the general improvement in the population reporting in the country over time. Given this finding, we assume that the more recent census (i.e. 2010 census) is better enumerated than its predecessor census (i.e. 2000 census). Consequently, any adjustments due to possible errors in reporting will require an adjustment of the earlier compared to the latter census enumerations.

In order to evaluate the 2000 census population, we compared the 2000 and the 2010 age structure using cohort survival ratios (CSR) measured using the formula (see Moultrie, 2012):

$${}_n CSR_x(a) = \frac{{}_n N_{x+a}(t+a)}{{}_n N_x(t)}$$

where:

${}_n N_x$ is the population at time t

${}_n N_{x+a}$ is the population at time t+a

We expect that mortality will be the main factor in the change in populations (unless migration is not negligible), thus the cohort survival ratios will not exceed unity.

The cohort survival analysis of the 2000 census reveals erratic changes marked by an increasing trend as well as dramatic declines in some age cohorts over the next ten years. It generally shows cohort survival ratios not exceeding one (1) except for the cohort 0-4 in 2000 who are 10-14 ten years later (Table 1). In particular, the population size of the cohort 0-4 in 2000 increased from 9,717,881 to 10,212,602 in 2010, about half a million (494,721) population or five percent over a ten year period. This finding is counterintuitive given the expected decline in the cohort size over time due to the force of mortality, assuming that the effect of international migration is nil or negligible.

Among all age cohorts in 2000, only those 0-4 registered an intercensal increase. While the rest of the age groups registered a declining cohort size over the ten year period, an uneven rate of decline is noted across the different age groups. Moreover, it is also noticeable that the differences in the population between the two censuses do not follow expected patterns. Given the J-shape of mortality, we find the very large decrease of almost 1.2 million within a decade in the population of those in the ages 20 to 29 in 2010 (and who were ages 10 to 19 in 2000), the highest attrition rate recorded across 5-year age groups exceeding even those in the older ages despite their significantly higher mortality levels, rather suspect. There were no notable events that occurred between 2000 and 2010 that could explain such large differences. In contrast very slight decline is noted in the 5-9, 25-29 and 30-34 cohorts in 2000 with the former registering a mere six thousand attrition within the 10-year period which are also unlikely.

Table 1. Age distribution of the Philippine population by five-year age groups: 2000 and 2010

Age Group	Population Count		Age Group cohort difference	Percent change in age group cohort	Cohort survival ratios
	2000 Census	2010 Census			
0-4	9,717,881	10,767,800			
5 - 9	9,743,040	10,354,995			
10 - 14	8,984,839	10,212,602	494,721	5.09	1.05091
15 - 19	8,033,709	9,736,809	(6,231)	(0.06)	0.99936
20 - 24	7,075,410	8,435,908	(548,931)	(6.11)	0.93890
25 - 29	6,079,901	7,447,783	(585,926)	(7.29)	0.92707
30 - 34	5,554,795	6,794,880	(280,530)	(3.96)	0.96035
35 - 39	4,912,393	6,033,444	(46,457)	(0.76)	0.99236
40 - 44	4,173,707	5,489,322	(65,473)	(1.18)	0.98821
45 - 49	3,340,230	4,695,819	(216,574)	(4.41)	0.95591
50 - 54	2,630,980	3,907,473	(266,234)	(6.38)	0.93621
55 - 59	1,910,637	2,996,829	(343,401)	(10.28)	0.89719
60 - 64	1,639,365	2,235,621	(395,359)	(15.03)	0.84973
65 - 69	1,143,233	1,502,411	(408,226)	(21.37)	0.78634
70 - 74	800,948	1,146,265	(493,100)	(30.08)	0.69921
75 - 79	507,197	709,407	(433,826)	(37.95)	0.62053
80+	491,420	667,851	(133,097)	(16.62)	0.83383
Total	76,739,685	93,135,219			

The observed increase in the population of the 0-4 in 2000 over the next ten years could either mean that the 2000 population is under enumerated or the 2010 figure for age group 10-14 is overestimated. Given our assumption that census enumeration is improving over time, it is safe to assume that the 2010 census is more accurate relative to the 2000 census and thus, the population 0-4 in 2000 is under enumerated.

Given the foregoing observation, one aim of this paper is to adjust the 2000 census counts using the results of the 2010 census as a basis for correction. Using reverse survival method, the paper hopes to provide an adjusted 2000 census count to come up with a more reasonable estimate as a basis for interpolating the school going population between 2000 and 2010. We

will demonstrate that the adjusted population for 2000 census is more refined and thus should be used as a basis for estimating the school-going population (ages 5 to 19 years old) for the 2001 – 2009. Adjusted estimates for the 2000 census by 5-year age group will also be presented.

Adjustment of the 2000 census population count

In adjusting the population, we used the survival rates from the 2000 Life Table (LT) estimates for the Philippines (see Table 2) and apply the reverse survival method detailed in Shryock, Siegel and Associates (1975). The survival rates express the survival from a younger age to an older age, but they can be used to restore deaths to an older population (Shryock, Siegel and Associates, 1975). Restoring deaths using survival rates can be computed by dividing the terminal population with the survival rates. We call the process reverse survival.

This is computed by dividing the terminal population with the survival rates as shown in the formula below (Shryock, Siegel and Associates, 1975: 452):

$${}_5E_{x-5}^{t-5} = \frac{{}_5P_x^t}{{}_5S_{x-5}^5}$$

where:

- ${}_5P_x^t$ is the initial or terminal population
- ${}_5S_{x-5}^5$ is the 5-year survival rate
- ${}_5E_{x-5}^{t-5}$ is the expected later or earlier population

Table 2. Survival Rates for Selected Age Groups: Philippines 2000

Survival Rates	Males	Females
${}_1S_0$	0.94372	0.94955
${}_4S_1$	0.98660	0.98737
${}_5S_5$	0.99514	0.99558

Source: Cabigon, 2009

Before applying these survival rates, it is important to prepare the population distribution in age groups consistent with the age grouping of the survival rates. The following section provides a detailed explanation of our estimation procedure of the adjusted 2000 population:

1. Using the population enumeration by single year of age in 2010, generate a population distribution by 5-year age group. This age grouping is desired since it is consistent with the age grouping of other data inputs needed for this estimation procedure (e.g. survival rates from the Life Table is provided by 5-year age groups).

- Reverse survive the 2010 population starting from 10-14 age group by sex using 2000 survival rates by 5-year age group by sex provided in the 2000 Life table estimates. Note that we only considered those 10 years and above in 2010 since this is the population who were already alive 10 years earlier (i.e. in 2000).

The following discussion will demonstrate the process of estimating the expected population 0-4 in 2000 using the population 10-14 in 2010 as an example. The process requires a two-step estimation procedure that will first estimate the population 5-9 in 2005 using the 10-14 population in 2010 and the survival rate for by sex for the population 5-9 (i.e. ${}_5S_5$). The second step will compute for the population 0-4 in 2000 by back-surviving the estimated 5-9 using the survival rate for 0-4 (i.e. ${}_4S_0$). The reason why we do this in two steps is because survival rates are provided by 5-year age groups. If survival rates in the life table were provided by 10-year age groups, then only a single-step procedure would be necessary. We demonstrate this procedure below using the 2010 census population for 10-14 by sex as starting point.

Table 3: Estimating the population 5-9 in 2005 based on the 2010 population

	Population 10-14 in 2010 (1)	Survival Rate for age group 5-9 (${}_5S_5$) (2)	Estimated 2005 population 5-9 in 2005 (3)=(1)/(2)
Males	5,253,979	0.99514	5,228,445
Females	4,958,623	0.99558	4,980,637

$${}_5E_{5-9}^{2005} = \frac{{}_5P_{10-14}^{2010}}{{}_5S_5}$$

$$\text{2005 Population age 5-9 (Males)} = 5,228,445 = \frac{5,253,979}{0.99514}$$

$$\text{2005 Population age 5-9 (Females)} = 4,980,637 = \frac{4,958,623}{0.99558}$$

Using the new estimates in Table 2, we back survive the derived population 5-9 to estimate the population 0-4 in 2000 using survival rates for age 0-4. We illustrate this in Table 4 below:

Table 4: Estimating the population 0-4 in 2000 using the 2005 population

	Estimated population 0-5 in 2005 (1)	Survival Rate for age group 0-4 (${}_4S_0$) (2)	Estimated 2000 population 0-4 in 2000 (3)=(1)/(2)
Males	5,228,445	0.94372	5,594,496
Females	4,980,637	0.94955	5,245,261

The estimated population in 2000 based on reverse survival procedure is provided in Table 5.

Table 5. Population count and age structure of the official and adjusted 2000 Census by five-year age groups: Philippines

Age group	Population Count (2000)			Age Structure		
	Official	Adjusted	Difference	Official	Adjusted	Difference
0-4	9,717,881	10,839,757	(1,121,876)	0.12663	0.14135	(0.01471)
5 - 9	9,743,040	9,828,378	(85,338)	0.12696	0.12816	(0.00120)
10 - 14	8,984,839	8,529,188	455,651	0.11708	0.11122	0.00586
15 - 19	8,033,709	7,559,952	473,757	0.10469	0.09858	0.00611
20 - 24	7,075,410	6,933,093	142,318	0.09220	0.09041	0.00179
25 - 29	6,079,901	6,193,114	(113,213)	0.07923	0.08076	(0.00153)
30 - 34	5,554,795	5,679,920	(125,125)	0.07238	0.07406	(0.00168)
35 - 39	4,912,393	4,924,215	(11,821)	0.06401	0.06421	(0.00020)
40 - 44	4,173,707	4,173,527	180	0.05439	0.05442	(0.00003)
45 - 49	3,340,230	3,277,369	62,861	0.04353	0.04274	0.00079
50 - 54	2,630,980	2,539,820	91,160	0.03428	0.03312	0.00117
55 - 59	1,910,637	1,807,476	103,161	0.02490	0.02357	0.00133
60 - 64	1,639,365	1,502,819	136,546	0.02136	0.01960	0.00177
65 - 69	1,143,233	1,072,567	70,665	0.01490	0.01399	0.00091
70+	1,799,565	1,827,940	(28,374)	0.02345	0.02384	(0.00039)
Total	76,739,685	76,689,134	50,551	1.00000	1.00000	(0.00000)

A comparison of the estimated population in 2000 and the official count show a slight difference, with the former deficient by 50,551 (or 0.066%) relative to the latter. To ensure that we maintain the official total population count in the 2000 census, we redistributed the discrepancy across the age groups proportional to age group size of the adjusted population count.

A comparison of the official and the adjusted population for the 2000 census shows an evident difference in the age distribution marked by a relatively higher share among those in the 0-4 and 5-9 age groups. Results show the adjusted population is higher by

1,121,876 and 85,338 for the age groups 0-4 and 5-9, respectively relative to the official count. This translates to a higher relative share to the population for these age groups: from 12.66% to 14.14% for the 0-4 age group and 12.7% to 12.8% for the 5-9 age group. In contrast, the succeeding age groups 10-14, 15-19 and 20-24 showed the opposite pattern with the adjusted population lower than the official counts. Interestingly, the population deficit of the official counts for the population less than 10 is almost the same with the over count for the age groups 10-24. This differential is clearly illustrated in Figure 1.

Figure 1. Percentage distribution of the population by 5-year age group for the official and estimated 2000 census population

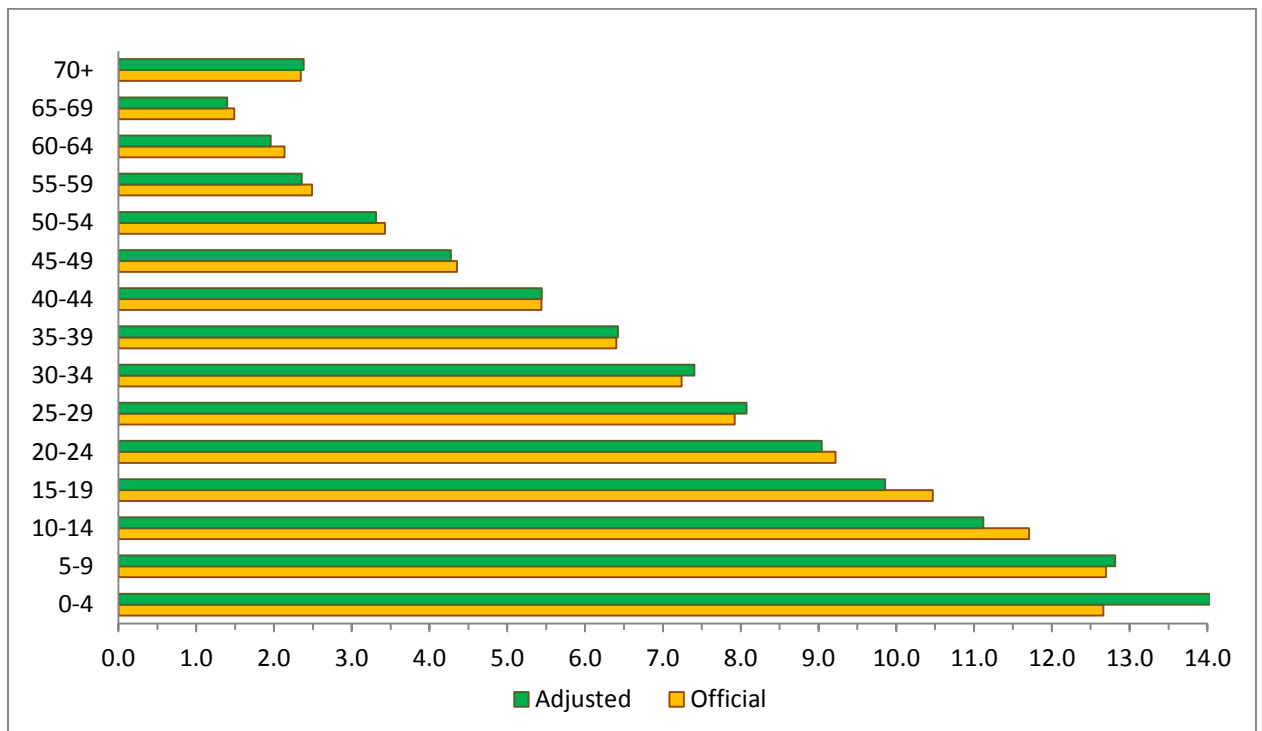


Table 6 shows that the adjusted 2000 population vis-à-vis the official 2010 population demonstrating a declining cohort size over time in accordance with the expected behavior.

Table 6. Age distribution of the Philippine population by five-year age groups:
adjusted 2000 and 2010

Age group	Adjusted 2000	%	2010	%	Age group cohort difference	Percent change in age group cohort
0-4	10,846,902	14.1	10,767,800	11.6		
5 - 9	9,834,857	12.8	10,354,995	11.1		
10 - 14	8,534,810	11.1	10,212,602	11.0	(634,300)	(5.85)
15 - 19	7,564,936	9.9	9,736,809	10.5	(98,048)	(1.00)
20 - 24	6,937,663	9.0	8,435,908	9.1	(98,902)	(1.16)
25 - 29	6,197,196	8.1	7,447,783	8.0	(117,153)	(1.55)
30 - 34	5,683,664	7.4	6,794,880	7.3	(142,783)	(2.06)
35 - 39	4,927,460	6.4	6,033,444	6.5	(163,752)	(2.64)
40 - 44	4,176,278	5.4	5,489,322	5.9	(194,342)	(3.42)
45 - 49	3,279,530	4.3	4,695,819	5.0	(231,641)	(4.70)
50 - 54	2,541,494	3.3	3,907,473	4.2	(268,805)	(6.44)
55 - 59	1,808,667	2.4	2,996,829	3.2	(282,701)	(8.62)
60 - 64	1,503,810	2.0	2,235,621	2.4	(305,873)	(12.04)
65 - 69	1,073,274	1.4	1,502,411	1.6	(306,256)	(16.93)
70+	1,829,145	2.4	2,523,523	2.7	(1,882,706)	(125.20)
Total	76,739,685	100.0	93,135,219	100.0		

- Noting that the adjusted 2000 population is more reasonable than the official 2000 estimate, we use the adjusted values to interpolate the yearly school-going population for the 2001-2009 period. This is done following the procedure and assumptions outlined below.

We assume that the growth rate for the period 2000 to 2010 (1.96%) will hold for the period, 2001 to 2009. Thus, we used the growth rate of 1.96 percent to estimate the total population for each year from 2001-2009. The resulting yearly population estimates were also compared with the official projections based on the 2000 census for further validation (See Annex Table A5). The official 2010 census population count at the national level is lower than the projections with a low assumption by more than one million. This result can be indicative of errors in the population projection assumptions.

To distribute the interpolated population by 5-year age group, we used an age structure that combines the 2000 and 2010 age structures. This was done by deriving the difference in the age structure (2000 census and 2010 census) and dividing the difference by 10 to get the yearly increment. We computed the yearly age structure by adding the yearly increment. Note that this method gave the optimum results as compared to other scenarios which used other methodologies including: (1) 2000 age

structure; (2) 2010 age structure; and (3) average of the 2000 and 2010 census age structures. Please see Annex Table A6.

4. After estimating the yearly population by 5-year age group, we determined the school going population for each year. To do this, we employed three interpolation techniques that subdivide those 5-year populations into single ages namely: (1) Sprague-Fifth Difference Formula; (2) Beers Six-Term Ordinary Formula and (3) Beers Six-Term Modified Formula. Results using these multipliers were then compared and we found that the Beers Six-Term Modified Formula gave the central estimate and thus was adopted in the study (Table 7a). Please see Annex Table A7 for the complete tables.

We then used a 3-year moving average to smoothen the interpolated single years of age for the school-age populations, i.e. ages 5 – 17. The results of which are provided in Table 7b. Refer to Annex Table A8 for the other estimates.

Table 7a. Estimated School Age Population: Philippines, 2001-2009 using Beers Six Term Modified Formula

Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,237,476	2,240,911	2,243,608	2,245,537	2,246,666	2,246,964	2,246,397	2,244,930	2,242,528
1	2,208,901	2,212,403	2,215,180	2,217,204	2,218,443	2,218,865	2,218,438	2,217,129	2,214,901
2	2,177,505	2,181,621	2,185,050	2,187,763	2,189,730	2,190,921	2,191,304	2,190,847	2,189,517
3	2,143,286	2,148,565	2,153,217	2,157,214	2,160,528	2,163,132	2,164,994	2,166,086	2,166,377
4	2,106,245	2,113,236	2,119,682	2,125,557	2,130,838	2,135,497	2,139,509	2,142,846	2,145,479
5	2,066,436	2,075,681	2,084,486	2,092,828	2,100,687	2,108,039	2,114,861	2,121,130	2,126,822
6	2,024,020	2,036,039	2,047,744	2,059,116	2,070,138	2,080,792	2,091,058	2,100,919	2,110,353
7	1,979,255	1,994,514	2,009,603	2,024,510	2,039,222	2,053,725	2,068,004	2,082,047	2,095,837
8	1,932,621	1,951,512	1,970,395	1,989,262	2,008,106	2,026,917	2,045,689	2,064,410	2,083,073
9	1,884,856	1,907,644	1,930,596	1,953,711	1,976,986	2,000,418	2,024,004	2,047,741	2,071,626
10	1,836,744	1,863,553	1,890,704	1,918,200	1,946,045	1,974,241	2,002,792	2,031,700	2,060,969
11	1,789,221	1,819,991	1,851,278	1,883,091	1,915,438	1,948,328	1,981,771	2,015,774	2,050,348
12	1,743,261	1,777,721	1,812,861	1,848,697	1,885,240	1,922,507	1,960,509	1,999,263	2,038,783
13	1,699,607	1,737,281	1,775,780	1,815,122	1,855,326	1,896,410	1,938,393	1,981,294	2,025,134
14	1,658,729	1,698,968	1,740,149	1,782,295	1,825,427	1,869,567	1,914,739	1,960,966	2,008,272
15	1,621,248	1,663,087	1,705,946	1,749,850	1,794,823	1,840,890	1,888,077	1,936,409	1,985,915
16	1,587,030	1,629,411	1,672,847	1,717,363	1,762,985	1,809,739	1,857,653	1,906,754	1,957,070
17	1,555,190	1,597,182	1,640,226	1,684,347	1,729,572	1,775,926	1,823,436	1,872,131	1,922,038
18	1,525,361	1,566,107	1,607,866	1,650,665	1,694,527	1,739,478	1,785,544	1,832,751	1,881,127
19	1,497,031	1,535,837	1,575,593	1,616,320	1,658,042	1,700,781	1,744,562	1,789,408	1,835,346

Table 7b. Estimated School Age Population: Philippines, 2001-2009 using 3-moving average

Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,239,193	2,240,665	2,243,352	2,245,270	2,246,389	2,246,676	2,246,097	2,244,618	2,243,729
1	2,210,652	2,212,161	2,214,929	2,216,942	2,218,170	2,218,582	2,218,144	2,216,823	2,216,015
2	2,179,563	2,181,392	2,184,811	2,187,514	2,189,471	2,190,652	2,191,024	2,190,556	2,190,182
3	2,145,926	2,148,356	2,152,999	2,156,986	2,160,291	2,162,885	2,164,737	2,165,819	2,166,232
4	2,109,740	2,113,054	2,119,492	2,125,359	2,130,631	2,135,281	2,139,284	2,142,611	2,144,162
5	2,071,059	2,075,534	2,084,332	2,092,667	2,100,518	2,107,862	2,114,677	2,120,938	2,123,976
6	2,030,030	2,035,934	2,047,633	2,058,999	2,070,015	2,080,663	2,090,923	2,100,777	2,105,636
7	1,986,885	1,994,458	2,009,543	2,024,445	2,039,152	2,053,650	2,067,925	2,081,963	2,088,942
8	1,942,067	1,951,510	1,970,390	1,989,254	2,008,095	2,026,904	2,045,672	2,064,391	2,073,742
9	1,896,250	1,907,699	1,930,650	1,953,765	1,977,038	2,000,469	2,024,054	2,047,791	2,059,684
10	1,850,148	1,863,667	1,890,819	1,918,316	1,946,162	1,974,359	2,002,911	2,031,821	2,046,335
11	1,804,606	1,820,163	1,851,453	1,883,269	1,915,619	1,948,512	1,981,958	2,015,964	2,033,061
12	1,760,491	1,777,948	1,813,093	1,848,933	1,885,481	1,922,752	1,960,760	1,999,519	2,019,023
13	1,718,444	1,737,556	1,776,061	1,815,409	1,855,619	1,896,709	1,938,699	1,981,607	2,003,214
14	1,678,848	1,699,282	1,740,471	1,782,624	1,825,763	1,869,911	1,915,091	1,961,326	1,984,619
15	1,642,167	1,663,427	1,706,294	1,750,207	1,795,188	1,841,263	1,888,459	1,936,800	1,961,162
16	1,608,220	1,629,763	1,673,207	1,717,731	1,763,362	1,810,126	1,858,049	1,907,159	1,931,912
17	1,576,186	1,597,533	1,640,585	1,684,715	1,729,948	1,776,311	1,823,831	1,872,535	1,897,084
18	1,545,734	1,566,445	1,608,213	1,651,020	1,694,890	1,739,850	1,785,925	1,833,141	1,856,939
19	1,516,434	1,536,154	1,575,917	1,616,652	1,658,381	1,701,128	1,744,917	1,789,772	1,812,377

Another aim of this paper is to provide an adjusted 2000 census count by validating the population count of the age group 0-4 by estimating the births from 1996 to 2000 with the use of fertility information (i.e.) from existing demographic and health survey data. It extends the analysis by following the same steps to validate the age group 0-4 in 2010. The following section details the procedure undertaken:

1. Using the unadjusted 1990 and 2000 populations as base populations and the annual population growth rates from 1990 to 2000 and 2000 to 2010, we interpolated the population of women ages 15-49 for the 1991-1999 period. This was done following the procedure and assumptions outlined below.

We assume that the growth rate for the period 1990 to 2000 (2.34%) will hold for the period, 1991 to 1999, and the growth rate for the period 2000 to 2010 (1.90) will hold for the period, 2001 to 2009. Thus, we used the growth rates 2.34% and 1.90% respectively to estimate the total population for each year from 1991-2009. To distribute the interpolated population by 5-year age group, we used an age structure that combines the 1990 and 2000 age structures, and 2000 and 2010 age structures. This was done by deriving the difference in the age structure (1990 census and 2000 census) and dividing the difference by 10 to get the yearly increment.

We computed the yearly age structure by adding the yearly increment. After estimating the yearly population by 5-year age group, we determined the population of women age 15-49 for each year by applying the sex ratio (average of the 1990 and 2000 census sex ratio and average of the 2000 and 2010 census sex ratio, by 5-year age group).

2. We computed for the estimated births from 1996 to 2000 (which will constitute the 0-4 age group in 2000) by applying the 1998 NDHS age-specific fertility rates (ASFR) to women of reproductive ages in 1996 to 1998 and the 2003 NDHS ASFR to women of reproductive ages in 1999 to 2000. In the same manner, the estimated births from 2006 to 2010 (which will constitute the 0-4 age group in 2010) was computed by applying the 2008 NDHS age-specific fertility rates (ASFR) to women of reproductive ages in 2006 to 2008 and the 2011 Family Health survey (FHS) ASFR to women of reproductive ages in 2009 to 2010.

3. By applying the average sex ratio for age 0-4, we estimated the number of males and females among these births. We then survived the births by sex using the average infant and child survival rates provided in the 1995 and 2000 Life table estimates to arrive at the estimated population age 0-4 in 2000.

Table 8A presents the estimated population age 0-4 in 2000 after employing the methodology previously discussed. Results show that there is an undercount in this age group by more than half a million (545,421). The estimated population age 0-4 in 2010 (see Table 8B) shows that the official count for this age group in 2010 can be fairly accurate.

Table 8A. Estimated population for age 0-4 in 2000 by estimating the births using the NDHS age-specific fertility rates

Sex	1996	1997	1998	1999	2000	Total
Male	1,007,760	1,032,150	1,057,131	1,082,715	1,052,884	5,232,641
Female	958,609	981,809	1,005,571	1,029,907	1,006,387	4,982,283
Total	1,966,369	2,013,960	2,062,702	2,112,623	2,059,271	10,214,923

Table 8B. Estimated population for age 0-4 in 20010 by estimating the births using the NDHS & FHS age-specific fertility rates

Sex	2006	2007	2008	2009	2010	Total
Male	1,080,804	1,101,912	1,123,431	1,083,844	1,020,839	5,410,831
Female	1,059,285	1,079,970	1,101,058	1,100,033	1,033,290	5,373,636
Total	2,140,090	2,181,882	2,224,489	2,183,877	2,054,129	10,784,467

We further estimated the population age 10-14 in 2010 by surviving the estimated population age 0-4 in 2000 using the survival rate for ages 0-4 and 5-9 and it shows a difference of over half a million (official count is 10,168,219 and the estimate of surviving population in 2010 is 9,624,164). This suggests that there might also be an over count in the population of age group 10-14 in 2010.

Conclusion

Using the adjusted population count in 2000 and the official population count in 2010 lead to a smoother and more acceptable inter-censal estimates of school-going population, ages 5 to 19 years old (2001-2009).

References:

Cabigon, J.V. (2009). *2000 Life Tables for the Philippines, Its Regions and Provinces by Sex*. Manila: Commission on Population.

Cruz, G.T, Magadia, J. and RB Malari, (forthcoming).

Hobbs, F. (2004). Age and Sex Composition. In J.S. Siegel and D.A. Swanson (Eds.) *The Methods and Materials of Demography*. California: Elsevier Academic Press.

Moultrie T.A. 2012. "General assessment of age and sex data". In Moultrie TA, RE Dorrington, AG Hill, K Hill, IM Timæus and B Zaba (eds). *Tools for Demographic Estimation*. Paris: International Union for the Scientific Study of Population. <http://demographicestimation.iussp.org/content/general-assessment-age-and-sex-data>. Accessed 1 August 2013.

National Statistics Office (2012). 2010 Census on Population for the Philippines. Downloaded from www.census.gov.ph on 13 November 2012.

Shryock, H.S., J. S. Siegel and Associates (1975). *The Methods and Materials of Demography Volumes 1 and 2*. Washington: U.S. Government Printing Office.

ANNEX

Table A1. Estimated Population by five-year age group using the official 2000 census as base population and the the 2000 and 2010 census annual population growth rate: 2001-2009

Scenario 1: Applying the official 2000 census age structure									
PHILIPPINES	2001	2002	2003	2004	2005	2006	2007	2008	2009
0-4	9,874,100	10,063,354	10,256,234	10,452,811	10,653,157	10,857,342	11,065,440	11,277,527	11,493,679
5-9	9,899,663	10,089,406	10,282,786	10,479,873	10,680,736	10,885,450	11,094,087	11,306,723	11,523,435
10-14	9,129,274	9,304,251	9,482,582	9,664,331	9,849,564	10,038,347	10,230,748	10,426,837	10,626,684
15-19	8,162,855	8,319,309	8,478,762	8,641,271	8,806,895	8,975,694	9,147,727	9,323,059	9,501,750
20-24	7,189,150	7,326,942	7,467,375	7,610,499	7,756,367	7,905,030	8,056,543	8,210,960	8,368,336
25-29	6,177,638	6,296,042	6,416,716	6,539,703	6,665,047	6,792,793	6,922,988	7,055,678	7,190,912
30-34	5,644,091	5,752,269	5,862,521	5,974,885	6,089,404	6,206,117	6,325,067	6,446,297	6,569,851
35-39	4,991,362	5,087,030	5,184,531	5,283,901	5,385,175	5,488,391	5,593,585	5,700,795	5,810,060
40-44	4,240,801	4,322,082	4,404,922	4,489,350	4,575,395	4,663,090	4,752,466	4,843,555	4,936,389
45-49	3,393,925	3,458,975	3,525,272	3,592,840	3,661,702	3,731,885	3,803,413	3,876,311	3,950,607
50-54	2,673,274	2,724,512	2,776,732	2,829,952	2,884,193	2,939,473	2,995,813	3,053,232	3,111,753
55-59	1,941,351	1,978,560	2,016,482	2,055,132	2,094,522	2,134,666	2,175,581	2,217,279	2,259,777
60-64	1,665,719	1,697,645	1,730,183	1,763,345	1,797,142	1,831,587	1,866,693	1,902,471	1,938,935
65-69	1,161,610	1,183,875	1,206,565	1,229,691	1,253,260	1,277,281	1,301,762	1,326,713	1,352,141
70-74	813,824	829,422	845,319	861,521	878,034	894,863	912,014	929,494	947,310
75-79	515,351	525,228	535,295	545,555	556,011	566,668	577,529	588,599	599,880
80+	499,319	508,890	518,643	528,584	538,715	549,041	559,564	570,289	581,219
All ages	77,973,307	79,467,792	80,990,922	82,543,244	84,125,319	85,737,717	87,381,020	89,055,819	90,762,718

Scenario 2: Applying the official 2010 census age structure

PHILIPPINES	2001	2002	2003	2004	2005	2006	2007	2008	2009
0-4	8,662,464	8,828,494	8,997,707	9,170,162	9,345,923	9,525,053	9,707,616	9,893,679	10,083,307
5-9	8,735,282	8,902,708	9,073,343	9,247,248	9,424,487	9,605,122	9,789,220	9,976,847	10,168,069
10-14	8,608,763	8,773,764	8,941,927	9,113,314	9,287,985	9,466,005	9,647,436	9,832,345	10,020,798
15-19	8,192,337	8,349,357	8,509,386	8,672,482	8,838,704	9,008,112	9,180,767	9,356,732	9,536,069
20-24	7,086,666	7,222,494	7,360,924	7,502,008	7,645,797	7,792,341	7,941,694	8,093,909	8,249,042
25-29	6,256,680	6,376,599	6,498,817	6,623,378	6,750,325	6,879,706	7,011,567	7,145,955	7,282,919
30-34	5,709,725	5,819,162	5,930,695	6,044,367	6,160,217	6,278,287	6,398,621	6,521,261	6,646,251
35-39	5,071,431	5,168,633	5,267,698	5,368,662	5,471,561	5,576,433	5,683,314	5,792,244	5,903,262
40-44	4,614,732	4,703,181	4,793,325	4,885,197	4,978,829	5,074,257	5,171,513	5,270,633	5,371,654
45-49	3,949,157	4,024,849	4,101,992	4,180,613	4,260,741	4,342,405	4,425,635	4,510,459	4,596,909
50-54	3,288,014	3,351,035	3,415,263	3,480,722	3,547,435	3,615,428	3,684,723	3,755,347	3,827,324
55-59	2,523,267	2,571,629	2,620,918	2,671,153	2,722,350	2,774,528	2,827,706	2,881,904	2,937,140
60-64	1,883,004	1,919,094	1,955,877	1,993,365	2,031,571	2,070,509	2,110,194	2,150,639	2,191,859
65-69	1,265,816	1,290,077	1,314,803	1,340,004	1,365,687	1,391,863	1,418,540	1,445,729	1,473,438
70-74	965,968	984,483	1,003,352	1,022,583	1,042,182	1,062,157	1,082,515	1,103,263	1,124,409
75-79	597,704	609,160	620,836	632,735	644,863	657,222	669,819	682,657	695,742
80+	562,296	573,074	584,058	595,252	606,661	618,289	630,139	642,217	654,526
All ages	77,973,307	79,467,792	80,990,922	82,543,244	84,125,319	85,737,717	87,381,020	89,055,819	90,762,718

Scenario 3: Applying the average of the official 2000 and official 2010 census age structures

PHILIPPINES	2001	2002	2003	2004	2005	2006	2007	2008	2009
0-4	9,268,282	9,445,924	9,626,970	9,811,487	9,999,540	10,191,197	10,386,528	10,585,603	10,788,493
5-9	9,317,473	9,496,057	9,678,065	9,863,560	10,052,612	10,245,286	10,441,654	10,641,785	10,845,752
10-14	8,869,018	9,039,007	9,212,255	9,388,822	9,568,774	9,752,176	9,939,092	10,129,591	10,323,741
15-19	8,177,596	8,334,333	8,494,074	8,656,877	8,822,800	8,991,903	9,164,247	9,339,895	9,518,909
20-24	7,137,908	7,274,718	7,414,150	7,556,254	7,701,082	7,848,685	7,999,118	8,152,434	8,308,689
25-29	6,217,159	6,336,321	6,457,767	6,581,540	6,707,686	6,836,250	6,967,278	7,100,817	7,236,915
30-34	5,676,908	5,785,715	5,896,608	6,009,626	6,124,810	6,242,202	6,361,844	6,483,779	6,608,051
35-39	5,031,397	5,127,831	5,226,115	5,326,282	5,428,368	5,532,412	5,638,450	5,746,520	5,856,661
40-44	4,427,766	4,512,632	4,599,123	4,687,273	4,777,112	4,868,673	4,961,989	5,057,094	5,154,021
45-49	3,671,541	3,741,912	3,813,632	3,886,726	3,961,222	4,037,145	4,114,524	4,193,385	4,273,758
50-54	2,980,644	3,037,773	3,095,997	3,155,337	3,215,814	3,277,450	3,340,268	3,404,290	3,469,538
55-59	2,232,309	2,275,095	2,318,700	2,363,142	2,408,436	2,454,597	2,501,643	2,549,592	2,598,459
60-64	1,774,361	1,808,370	1,843,030	1,878,355	1,914,356	1,951,048	1,988,443	2,026,555	2,065,397
65-69	1,213,713	1,236,976	1,260,684	1,284,848	1,309,474	1,334,572	1,360,151	1,386,221	1,412,790
70-74	889,896	906,952	924,336	942,052	960,108	978,510	997,265	1,016,379	1,035,859
75-79	556,528	567,194	578,066	589,145	600,437	611,945	623,674	635,628	647,811
80+	530,808	540,982	551,351	561,918	572,688	583,665	594,851	606,253	617,873
All ages	77,973,307	79,467,792	80,990,922	82,543,244	84,125,319	85,737,717	87,381,020	89,055,819	90,762,718

Scenario 4: Getting the difference in the age structure (official 2000 census and official 2010 census); dividing the difference by 10 to get the yearly increment. Computing the yearly age structure by adding the yearly increment. Applying the computed yearly age structure to the computed yearly total population.

PHILIPPINES	2001	2002	2003	2004	2005	2006	2007	2008	2009
0-4	9,752,937	9,816,382	9,878,676	9,939,752	9,999,540	10,057,969	10,114,963	10,170,448	10,224,344
5-9	9,783,225	9,852,067	9,919,953	9,986,823	10,052,612	10,117,253	10,180,680	10,242,822	10,303,606
10-14	9,077,223	9,198,154	9,320,386	9,443,924	9,568,774	9,694,941	9,822,429	9,951,243	10,081,386
15-19	8,165,803	8,325,319	8,487,949	8,653,756	8,822,800	8,995,145	9,170,855	9,349,997	9,532,637
20-24	7,178,902	7,306,052	7,435,440	7,567,103	7,701,082	7,837,416	7,976,148	8,117,319	8,260,971
25-29	6,185,542	6,312,154	6,441,346	6,573,173	6,707,686	6,844,941	6,984,993	7,127,900	7,273,718
30-34	5,650,654	5,765,648	5,882,973	6,002,678	6,124,810	6,249,419	6,376,555	6,506,268	6,638,611
35-39	4,999,369	5,103,350	5,209,481	5,317,805	5,428,368	5,541,216	5,656,395	5,773,954	5,893,942
40-44	4,278,194	4,398,302	4,521,443	4,647,688	4,777,112	4,909,790	5,045,799	5,185,218	5,328,127
45-49	3,449,449	3,572,150	3,698,288	3,827,949	3,961,222	4,098,197	4,238,968	4,383,630	4,532,279
50-54	2,734,748	2,849,816	2,968,291	3,090,260	3,215,814	3,345,046	3,478,050	3,614,924	3,755,767
55-59	1,999,543	2,097,174	2,197,813	2,301,540	2,408,436	2,518,583	2,632,069	2,748,979	2,869,404
60-64	1,687,447	1,741,935	1,797,891	1,855,353	1,914,356	1,974,940	2,037,143	2,101,005	2,166,567
65-69	1,172,031	1,205,115	1,239,037	1,273,816	1,309,474	1,346,030	1,383,507	1,421,925	1,461,309
70-74	829,038	860,434	892,729	925,946	960,108	995,239	1,031,365	1,068,510	1,106,699
75-79	523,586	542,015	560,957	580,427	600,437	621,001	642,132	663,846	686,155
80+	505,617	521,727	538,268	555,251	572,688	590,589	608,967	627,831	647,195
All ages	77,973,307	79,467,792	80,990,922	82,543,244	84,125,319	85,737,717	87,381,020	89,055,819	90,762,718

Table A2. Estimated School Age Population using the official 2000 census as base population and the the 2000 and 2010 census annual population growth rate: Philippines, 2001-2009

Scenario 1: Applying the 2000 census age structure									
A. Beers Six Term Ordinary Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,926,048	1,962,964	2,000,588	2,038,932	2,078,011	2,117,840	2,158,432	2,199,802	2,241,964
1	1,958,113	1,995,644	2,033,893	2,072,876	2,112,606	2,153,098	2,194,365	2,236,424	2,279,289
2	1,982,533	2,020,532	2,059,258	2,098,727	2,138,953	2,179,949	2,221,732	2,264,315	2,307,714
3	1,999,240	2,037,559	2,076,612	2,116,413	2,156,978	2,198,320	2,240,454	2,283,396	2,327,161
4	2,008,166	2,046,655	2,085,883	2,125,862	2,166,608	2,208,134	2,250,457	2,293,591	2,337,551
5	2,009,201	2,047,711	2,086,958	2,126,958	2,167,725	2,209,273	2,251,617	2,294,773	2,338,756
6	2,002,278	2,040,655	2,079,767	2,119,629	2,160,255	2,201,660	2,243,859	2,286,866	2,330,697
7	1,987,452	2,025,544	2,064,367	2,103,934	2,144,259	2,185,358	2,227,244	2,269,932	2,313,439
8	1,964,983	2,002,645	2,041,029	2,080,149	2,120,018	2,160,652	2,202,064	2,244,270	2,287,285
9	1,935,750	1,972,852	2,010,665	2,049,202	2,088,478	2,128,508	2,169,304	2,210,882	2,253,257
10	1,901,288	1,937,729	1,974,869	2,012,720	2,051,297	2,090,614	2,130,684	2,171,522	2,213,142
11	1,863,707	1,899,428	1,935,834	1,972,937	2,010,752	2,049,291	2,088,569	2,128,600	2,169,398
12	1,825,367	1,860,353	1,896,010	1,932,350	1,969,387	2,007,133	2,045,603	2,084,810	2,124,769
13	1,787,926	1,822,194	1,857,119	1,892,714	1,928,991	1,965,963	2,003,644	2,042,047	2,081,186
14	1,750,986	1,784,547	1,818,750	1,853,610	1,889,137	1,925,345	1,962,248	1,999,857	2,038,188
15	1,712,243	1,745,061	1,778,508	1,812,596	1,847,338	1,882,745	1,918,831	1,955,608	1,993,091
16	1,671,597	1,703,636	1,736,289	1,769,567	1,803,484	1,838,051	1,873,280	1,909,184	1,945,777
17	1,631,533	1,662,804	1,694,674	1,727,155	1,760,259	1,793,997	1,828,382	1,863,426	1,899,142
18	1,592,726	1,623,253	1,654,366	1,686,074	1,718,391	1,751,326	1,784,893	1,819,104	1,853,970
19	1,554,755	1,584,555	1,614,925	1,645,878	1,677,424	1,709,574	1,742,341	1,775,736	1,809,771

B. Beers Six Term Modified Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,931,865	1,968,892	2,006,629	2,045,090	2,084,287	2,124,236	2,164,950	2,206,445	2,248,735
1	1,960,636	1,998,214	2,036,513	2,075,547	2,115,328	2,155,871	2,197,192	2,239,305	2,282,225
2	1,982,113	2,020,104	2,058,822	2,098,283	2,138,500	2,179,488	2,221,261	2,263,835	2,307,225
3	1,996,298	2,034,560	2,073,556	2,113,299	2,153,803	2,195,085	2,237,157	2,280,036	2,323,736
4	2,003,189	2,041,583	2,080,714	2,120,594	2,161,238	2,202,662	2,244,880	2,287,906	2,331,758
5	2,002,828	2,041,216	2,080,339	2,120,212	2,160,849	2,202,266	2,244,476	2,287,495	2,331,338
6	1,995,358	2,033,602	2,072,579	2,112,304	2,152,789	2,194,051	2,236,104	2,278,962	2,322,642
7	1,981,078	2,019,048	2,057,746	2,097,187	2,137,383	2,178,349	2,220,101	2,262,652	2,306,020
8	1,960,433	1,998,008	2,036,303	2,075,332	2,115,109	2,155,649	2,196,965	2,239,074	2,281,989
9	1,934,170	1,971,241	2,009,023	2,047,530	2,086,774	2,126,770	2,167,533	2,209,077	2,251,418
10	1,903,112	1,939,588	1,976,764	2,014,652	2,053,266	2,092,620	2,132,728	2,173,606	2,215,266
11	1,868,302	1,904,111	1,940,607	1,977,802	2,015,710	2,054,344	2,093,719	2,133,848	2,174,747
12	1,830,918	1,866,010	1,901,776	1,938,226	1,975,375	2,013,237	2,051,824	2,091,150	2,131,231
13	1,792,048	1,826,395	1,861,401	1,897,078	1,933,438	1,970,496	2,008,263	2,046,755	2,085,984
14	1,752,574	1,786,165	1,820,400	1,855,291	1,890,850	1,927,092	1,964,027	2,001,671	2,040,036
15	1,713,177	1,746,013	1,779,478	1,813,585	1,848,345	1,883,772	1,919,877	1,956,675	1,994,178
16	1,673,969	1,706,053	1,738,752	1,772,078	1,806,043	1,840,659	1,875,938	1,911,893	1,948,538
17	1,634,493	1,665,821	1,697,749	1,730,289	1,763,453	1,797,252	1,831,699	1,866,807	1,902,587
18	1,595,003	1,625,574	1,656,731	1,688,484	1,720,847	1,753,830	1,787,445	1,821,704	1,856,620
19	1,555,641	1,585,458	1,615,846	1,646,816	1,678,380	1,710,549	1,743,334	1,776,748	1,810,802

C. Sprague Fifth-Difference Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,914,412	1,951,105	1,988,501	2,026,614	2,065,457	2,105,045	2,145,391	2,186,511	2,228,419
1	1,956,263	1,993,758	2,031,971	2,070,918	2,110,610	2,151,063	2,192,292	2,234,311	2,277,135
2	1,985,987	2,024,052	2,062,846	2,102,384	2,142,679	2,183,747	2,225,602	2,268,260	2,311,735
3	2,004,544	2,042,965	2,082,121	2,122,029	2,162,701	2,204,152	2,246,398	2,289,454	2,333,335
4	2,012,894	2,051,475	2,090,794	2,130,868	2,171,709	2,213,334	2,255,756	2,298,991	2,343,055
5	2,011,997	2,050,560	2,089,863	2,129,918	2,170,741	2,212,347	2,254,750	2,297,966	2,342,011
6	2,002,812	2,041,200	2,080,322	2,120,195	2,160,832	2,202,248	2,244,458	2,287,476	2,331,320
7	1,986,300	2,024,371	2,063,171	2,102,715	2,143,017	2,184,092	2,225,953	2,268,617	2,312,099
8	1,963,421	2,001,053	2,039,406	2,078,495	2,118,332	2,158,934	2,200,313	2,242,486	2,285,467
9	1,935,133	1,972,223	2,010,024	2,048,549	2,087,813	2,127,829	2,168,613	2,210,178	2,252,539
10	1,901,740	1,938,190	1,975,338	2,013,199	2,051,785	2,091,111	2,131,190	2,172,038	2,213,669
11	1,863,543	1,899,261	1,935,663	1,972,763	2,010,574	2,049,110	2,088,385	2,128,412	2,169,207
12	1,824,791	1,859,766	1,895,412	1,931,741	1,968,766	2,006,500	2,044,958	2,084,153	2,124,099
13	1,787,761	1,822,027	1,856,949	1,892,540	1,928,814	1,965,782	2,003,460	2,041,859	2,080,995
14	1,751,438	1,785,007	1,819,220	1,854,088	1,889,625	1,925,843	1,962,755	2,000,374	2,038,714
15	1,712,485	1,745,307	1,778,759	1,812,852	1,847,598	1,883,010	1,919,101	1,955,884	1,993,371
16	1,671,509	1,703,546	1,736,198	1,769,475	1,803,389	1,837,954	1,873,182	1,909,084	1,945,675
17	1,631,226	1,662,491	1,694,355	1,726,830	1,759,928	1,793,660	1,828,038	1,863,076	1,898,784
18	1,592,638	1,623,164	1,654,275	1,685,981	1,718,296	1,751,230	1,784,795	1,819,004	1,853,868
19	1,554,996	1,584,800	1,615,176	1,646,133	1,677,684	1,709,840	1,742,611	1,776,011	1,810,052

Scenario 2: Applying the 2010 census age structure

A. Beers Six Term Ordinary Formula

Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,728,881	1,762,017	1,795,789	1,830,208	1,865,287	1,901,039	1,937,475	1,974,610	2,012,457
1	1,728,505	1,761,634	1,795,399	1,829,811	1,864,882	1,900,625	1,937,054	1,974,181	2,012,019
2	1,730,769	1,763,942	1,797,751	1,832,208	1,867,325	1,903,115	1,939,592	1,976,767	2,014,655
3	1,734,757	1,768,007	1,801,894	1,836,430	1,871,628	1,907,501	1,944,061	1,981,322	2,019,297
4	1,739,552	1,772,894	1,806,874	1,841,506	1,876,801	1,912,773	1,949,434	1,986,798	2,024,879
5	1,744,206	1,777,637	1,811,708	1,846,432	1,881,822	1,917,890	1,954,650	1,992,114	2,030,296
6	1,747,802	1,781,301	1,815,443	1,850,239	1,885,702	1,921,844	1,958,679	1,996,221	2,034,481
7	1,749,516	1,783,048	1,817,223	1,852,053	1,887,551	1,923,729	1,960,600	1,998,178	2,036,476
8	1,748,678	1,782,194	1,816,353	1,851,166	1,886,646	1,922,807	1,959,661	1,997,221	2,035,501
9	1,745,081	1,778,528	1,812,617	1,847,359	1,882,766	1,918,852	1,955,630	1,993,113	2,031,314
10	1,739,013	1,772,344	1,806,314	1,840,935	1,876,220	1,912,180	1,948,830	1,986,183	2,024,251
11	1,731,194	1,764,375	1,798,192	1,832,657	1,867,783	1,903,582	1,940,068	1,977,252	2,015,149
12	1,722,528	1,755,543	1,789,191	1,823,484	1,858,434	1,894,054	1,930,356	1,967,355	2,005,062
13	1,713,395	1,746,235	1,779,705	1,813,816	1,848,581	1,884,012	1,920,122	1,956,924	1,994,432
14	1,702,632	1,735,266	1,768,525	1,802,422	1,836,968	1,872,177	1,908,060	1,944,631	1,981,903
15	1,691,770	1,724,196	1,757,243	1,790,923	1,825,249	1,860,233	1,895,888	1,932,225	1,969,260
16	1,676,657	1,708,793	1,741,545	1,774,925	1,808,944	1,843,615	1,878,951	1,914,964	1,951,668
17	1,650,803	1,682,443	1,714,690	1,747,555	1,781,049	1,815,186	1,849,977	1,885,435	1,921,572
18	1,611,249	1,642,131	1,673,605	1,705,682	1,738,375	1,771,693	1,805,651	1,840,259	1,875,530
19	1,561,858	1,591,794	1,622,303	1,653,397	1,685,087	1,717,385	1,750,301	1,783,848	1,818,039

B. Beers Six Term Modified Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,716,692	1,749,595	1,783,129	1,817,305	1,852,137	1,887,636	1,923,816	1,960,689	1,998,268
1	1,726,233	1,759,319	1,793,039	1,827,405	1,862,431	1,898,127	1,934,508	1,971,586	2,009,374
2	1,734,133	1,767,371	1,801,245	1,835,769	1,870,955	1,906,814	1,943,362	1,980,609	2,018,571
3	1,740,393	1,773,751	1,807,748	1,842,396	1,877,709	1,913,698	1,950,377	1,987,759	2,025,858
4	1,745,013	1,778,459	1,812,546	1,847,287	1,882,693	1,918,778	1,955,554	1,993,036	2,031,235
5	1,748,024	1,781,527	1,815,673	1,850,473	1,885,941	1,922,088	1,958,928	1,996,474	2,034,740
6	1,749,477	1,783,009	1,817,183	1,852,012	1,887,509	1,923,686	1,960,557	1,998,134	2,036,431
7	1,749,328	1,782,857	1,817,028	1,851,855	1,887,349	1,923,523	1,960,390	1,997,964	2,036,258
8	1,747,696	1,781,193	1,815,333	1,850,126	1,885,587	1,921,727	1,958,560	1,996,099	2,034,358
9	1,744,652	1,778,091	1,812,171	1,846,904	1,882,303	1,918,381	1,955,150	1,992,623	2,030,815
10	1,740,221	1,773,575	1,807,569	1,842,214	1,877,523	1,913,509	1,950,184	1,987,563	2,025,657
11	1,734,320	1,767,561	1,801,439	1,835,967	1,871,156	1,907,020	1,943,571	1,980,823	2,018,788
12	1,726,696	1,759,791	1,793,521	1,827,896	1,862,931	1,898,637	1,935,027	1,972,115	2,009,914
13	1,716,815	1,749,721	1,783,257	1,817,436	1,852,270	1,887,772	1,923,954	1,960,830	1,998,412
14	1,703,987	1,736,647	1,769,933	1,803,856	1,838,430	1,873,667	1,909,578	1,946,179	1,983,480
15	1,686,194	1,718,512	1,751,450	1,785,020	1,819,232	1,854,101	1,889,638	1,925,856	1,962,768
16	1,662,366	1,694,228	1,726,700	1,759,795	1,793,525	1,827,900	1,862,935	1,898,641	1,935,032
17	1,632,385	1,663,672	1,695,559	1,728,058	1,761,179	1,794,934	1,829,337	1,864,400	1,900,134
18	1,596,618	1,627,220	1,658,408	1,690,194	1,722,589	1,755,605	1,789,254	1,823,548	1,858,500
19	1,556,112	1,585,937	1,616,334	1,647,314	1,678,887	1,711,066	1,743,861	1,777,285	1,811,350

C. Sprague Fifth-Difference Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,720,142	1,753,112	1,786,713	1,820,958	1,855,860	1,891,430	1,927,683	1,964,630	2,002,285
1	1,727,115	1,760,218	1,793,956	1,828,340	1,863,383	1,899,098	1,935,497	1,972,594	2,010,402
2	1,733,363	1,766,586	1,800,445	1,834,954	1,870,123	1,905,967	1,942,498	1,979,730	2,017,674
3	1,738,741	1,772,066	1,806,031	1,840,646	1,875,925	1,911,881	1,948,525	1,985,871	2,023,934
4	1,743,103	1,776,512	1,810,562	1,845,265	1,880,632	1,916,677	1,953,414	1,990,854	2,029,012
5	1,746,306	1,779,776	1,813,889	1,848,655	1,884,087	1,920,199	1,957,003	1,994,512	2,032,740
6	1,748,203	1,781,710	1,815,860	1,850,664	1,886,135	1,922,286	1,959,129	1,996,679	2,034,949
7	1,748,651	1,782,167	1,816,325	1,851,138	1,886,618	1,922,778	1,959,631	1,997,191	2,035,470
8	1,747,504	1,780,998	1,815,134	1,849,924	1,885,381	1,921,517	1,958,346	1,995,881	2,034,135
9	1,744,618	1,778,056	1,812,136	1,846,868	1,882,266	1,918,343	1,955,111	1,992,584	2,030,775
10	1,739,353	1,772,690	1,806,667	1,841,295	1,876,586	1,912,554	1,949,211	1,986,571	2,024,647
11	1,731,070	1,764,249	1,798,064	1,832,527	1,867,650	1,903,447	1,939,929	1,977,111	2,015,006
12	1,722,096	1,755,102	1,788,742	1,823,026	1,857,967	1,893,578	1,929,872	1,966,861	2,004,559
13	1,713,272	1,746,110	1,779,577	1,813,685	1,848,447	1,883,876	1,919,983	1,956,783	1,994,288
14	1,702,972	1,735,612	1,768,878	1,802,781	1,837,335	1,872,550	1,908,441	1,945,019	1,982,298
15	1,690,270	1,722,667	1,755,684	1,789,335	1,823,630	1,858,583	1,894,206	1,930,511	1,967,513
16	1,677,203	1,709,349	1,742,112	1,775,502	1,809,533	1,844,215	1,879,563	1,915,587	1,952,303
17	1,652,713	1,684,390	1,716,674	1,749,577	1,783,110	1,817,286	1,852,118	1,887,616	1,923,796
18	1,611,794	1,642,687	1,674,172	1,706,260	1,738,963	1,772,293	1,806,262	1,840,882	1,876,166
19	1,560,357	1,590,264	1,620,744	1,651,808	1,683,468	1,715,734	1,748,619	1,782,134	1,816,292

Scenario 3: Applying the average of the 2000 and 2010 census age structures

A. Beers Six Term Ordinary Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,827,464	1,862,491	1,898,188	1,934,570	1,971,649	2,009,439	2,047,953	2,087,206	2,127,210
1	1,843,309	1,878,639	1,914,646	1,951,343	1,988,744	2,026,862	2,065,710	2,105,302	2,145,654
2	1,856,651	1,892,237	1,928,505	1,965,468	2,003,139	2,041,532	2,080,662	2,120,541	2,161,185
3	1,866,999	1,902,783	1,939,253	1,976,422	2,014,303	2,052,910	2,092,258	2,132,359	2,173,229
4	1,873,859	1,909,774	1,946,378	1,983,684	2,021,704	2,060,454	2,099,946	2,140,194	2,181,215
5	1,876,703	1,912,674	1,949,333	1,986,695	2,024,773	2,063,581	2,103,133	2,143,443	2,184,526
6	1,875,040	1,910,978	1,947,605	1,984,934	2,022,979	2,061,752	2,101,269	2,141,543	2,182,589
7	1,868,484	1,904,296	1,940,795	1,977,994	2,015,905	2,054,543	2,093,922	2,134,055	2,174,958
8	1,856,830	1,892,420	1,928,691	1,965,657	2,003,332	2,041,729	2,080,862	2,120,746	2,161,393
9	1,840,415	1,875,690	1,911,641	1,948,280	1,985,622	2,023,680	2,062,467	2,101,998	2,142,286
10	1,820,150	1,855,037	1,890,591	1,926,828	1,963,758	2,001,397	2,039,757	2,078,852	2,118,697
11	1,797,451	1,831,902	1,867,013	1,902,797	1,939,268	1,976,437	2,014,318	2,052,926	2,092,274
12	1,773,948	1,807,948	1,842,600	1,877,917	1,913,910	1,950,593	1,987,980	2,026,082	2,064,916
13	1,750,661	1,784,215	1,818,412	1,853,265	1,888,786	1,924,987	1,961,883	1,999,486	2,037,809
14	1,726,809	1,759,906	1,793,638	1,828,016	1,863,053	1,898,761	1,935,154	1,972,244	2,010,046
15	1,702,007	1,734,629	1,767,876	1,801,760	1,836,294	1,871,489	1,907,359	1,943,917	1,981,175
16	1,674,127	1,706,214	1,738,917	1,772,246	1,806,214	1,840,833	1,876,116	1,912,074	1,948,722
17	1,641,168	1,672,623	1,704,682	1,737,355	1,770,654	1,804,592	1,839,180	1,874,431	1,910,357
18	1,601,987	1,632,692	1,663,985	1,695,878	1,728,383	1,761,510	1,795,272	1,829,681	1,864,750
19	1,558,307	1,588,174	1,618,614	1,649,637	1,681,255	1,713,479	1,746,321	1,779,792	1,813,905

B. Beers Six Term Modified Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,824,278	1,859,244	1,894,879	1,931,197	1,968,212	2,005,936	2,044,383	2,083,567	2,123,502
1	1,843,434	1,878,767	1,914,776	1,951,476	1,988,879	2,026,999	2,065,850	2,105,445	2,145,800
2	1,858,123	1,893,737	1,930,034	1,967,026	2,004,727	2,043,151	2,082,311	2,122,222	2,162,898
3	1,868,346	1,904,155	1,940,652	1,977,847	2,015,756	2,054,391	2,093,767	2,133,897	2,174,797
4	1,874,101	1,910,021	1,946,630	1,983,940	2,021,966	2,060,720	2,100,217	2,140,471	2,181,497
5	1,875,426	1,911,372	1,948,006	1,985,343	2,023,395	2,062,177	2,101,702	2,141,984	2,183,039
6	1,872,417	1,908,305	1,944,881	1,982,158	2,020,149	2,058,869	2,098,330	2,138,548	2,179,537
7	1,865,203	1,900,953	1,937,387	1,974,521	2,012,366	2,050,936	2,090,245	2,130,308	2,171,139
8	1,854,064	1,889,601	1,925,818	1,962,729	2,000,348	2,038,688	2,077,763	2,117,587	2,158,174
9	1,839,411	1,874,666	1,910,597	1,947,217	1,984,539	2,022,575	2,061,341	2,100,850	2,141,117
10	1,821,667	1,856,582	1,892,166	1,928,433	1,965,394	2,003,064	2,041,456	2,080,584	2,120,462
11	1,801,311	1,835,836	1,871,023	1,906,884	1,943,433	1,980,682	2,018,645	2,057,335	2,096,768
12	1,778,807	1,812,901	1,847,648	1,883,061	1,919,153	1,955,937	1,993,426	2,031,633	2,070,572
13	1,754,431	1,788,058	1,822,329	1,857,257	1,892,854	1,929,134	1,966,109	2,003,793	2,042,198
14	1,728,281	1,761,406	1,795,166	1,829,573	1,864,640	1,900,379	1,936,803	1,973,925	2,011,758
15	1,699,685	1,732,263	1,765,464	1,799,302	1,833,789	1,868,936	1,904,757	1,941,265	1,978,473
16	1,668,167	1,700,140	1,732,726	1,765,937	1,799,784	1,834,280	1,869,437	1,905,267	1,941,785
17	1,633,439	1,664,747	1,696,654	1,729,173	1,762,316	1,796,093	1,830,518	1,865,603	1,901,361
18	1,595,810	1,626,397	1,657,569	1,689,339	1,721,718	1,754,718	1,788,350	1,822,626	1,857,560
19	1,555,877	1,585,697	1,616,090	1,647,065	1,678,634	1,710,807	1,743,598	1,777,017	1,811,076

C. Sprague Fifth-Difference Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,817,277	1,852,108	1,887,607	1,923,786	1,960,658	1,998,238	2,036,537	2,075,571	2,115,352
1	1,841,689	1,876,988	1,912,964	1,949,629	1,986,996	2,025,080	2,063,894	2,103,452	2,143,768
2	1,859,675	1,895,319	1,931,646	1,968,669	2,006,401	2,044,857	2,084,050	2,123,995	2,164,704
3	1,871,642	1,907,515	1,944,076	1,981,337	2,019,313	2,058,016	2,097,462	2,137,663	2,178,635
4	1,877,999	1,913,994	1,950,678	1,988,066	2,026,171	2,065,006	2,104,585	2,144,923	2,186,034
5	1,879,151	1,915,168	1,951,876	1,989,286	2,027,414	2,066,273	2,105,877	2,146,239	2,187,375
6	1,875,508	1,911,455	1,948,091	1,985,429	2,023,483	2,062,267	2,101,793	2,142,078	2,183,134
7	1,867,476	1,903,269	1,939,748	1,976,927	2,014,818	2,053,435	2,092,792	2,132,904	2,173,785
8	1,855,462	1,891,025	1,927,270	1,964,209	2,001,856	2,040,225	2,079,330	2,119,183	2,159,801
9	1,839,875	1,875,140	1,911,080	1,947,709	1,985,040	2,023,086	2,061,862	2,101,381	2,141,657
10	1,820,546	1,855,440	1,891,003	1,927,247	1,964,186	2,001,832	2,040,201	2,079,304	2,119,158
11	1,797,307	1,831,755	1,866,863	1,902,645	1,939,112	1,976,278	2,014,157	2,052,762	2,092,106
12	1,773,444	1,807,434	1,842,077	1,877,383	1,913,366	1,950,039	1,987,415	2,025,507	2,064,329
13	1,750,517	1,784,068	1,818,263	1,853,113	1,888,630	1,924,829	1,961,722	1,999,321	2,037,641
14	1,727,205	1,760,310	1,794,049	1,828,435	1,863,480	1,899,196	1,935,598	1,972,697	2,010,506
15	1,701,377	1,733,987	1,767,222	1,801,093	1,835,614	1,870,797	1,906,653	1,943,198	1,980,442
16	1,674,356	1,706,448	1,739,155	1,772,488	1,806,461	1,841,085	1,876,372	1,912,336	1,948,989
17	1,641,969	1,673,440	1,705,515	1,738,204	1,771,519	1,805,473	1,840,078	1,875,346	1,911,290
18	1,602,216	1,632,926	1,664,223	1,696,121	1,728,630	1,761,762	1,795,529	1,829,943	1,865,017
19	1,557,677	1,587,532	1,617,960	1,648,971	1,680,576	1,712,787	1,745,615	1,779,073	1,813,172

Scenario 4: Getting the difference in the age structure (2000 census and 2010 census); dividing the difference by 10 to get the yearly increment. Computing the yearly age structure by adding the yearly increment. Applying the computed yearly age structure to the computed yearly total population.

A. Beers Six Term Ordinary Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,906,331	1,922,775	1,939,148	1,955,443	1,971,649	1,987,759	2,003,762	2,019,648	2,035,407
1	1,935,152	1,948,842	1,962,345	1,975,650	1,988,744	2,001,614	2,014,247	2,026,629	2,038,746
2	1,957,357	1,969,214	1,980,806	1,992,120	2,003,139	2,013,849	2,024,234	2,034,277	2,043,961
3	1,972,792	1,983,648	1,994,196	2,004,420	2,014,303	2,023,828	2,032,979	2,041,737	2,050,084
4	1,981,304	1,991,903	2,002,180	2,012,120	2,021,704	2,030,918	2,039,741	2,048,157	2,056,146
5	1,982,701	1,993,696	2,004,383	2,014,748	2,024,773	2,034,443	2,043,740	2,052,646	2,061,142
6	1,976,830	1,988,784	2,000,470	2,011,873	2,022,979	2,033,771	2,044,233	2,054,350	2,064,103
7	1,963,658	1,977,045	1,990,224	2,003,182	2,015,905	2,028,380	2,040,593	2,052,529	2,064,173
8	1,943,353	1,958,555	1,973,626	1,988,556	2,003,332	2,017,945	2,032,382	2,046,631	2,060,679
9	1,916,683	1,933,987	1,951,250	1,968,465	1,985,622	2,002,714	2,019,732	2,036,667	2,053,509
10	1,885,060	1,904,652	1,924,302	1,944,006	1,963,758	1,983,554	2,003,386	2,023,251	2,043,140
11	1,850,456	1,872,418	1,894,541	1,916,825	1,939,268	1,961,866	1,984,618	2,007,522	2,030,574
12	1,815,083	1,839,391	1,863,964	1,888,803	1,913,910	1,939,285	1,964,930	1,990,846	2,017,033
13	1,780,473	1,807,002	1,833,895	1,861,155	1,888,786	1,916,792	1,945,178	1,973,949	2,003,107
14	1,746,151	1,774,690	1,803,683	1,833,135	1,863,053	1,893,444	1,924,316	1,955,676	1,987,532
15	1,710,196	1,740,888	1,772,129	1,803,927	1,836,294	1,869,238	1,902,771	1,936,902	1,971,643
16	1,672,103	1,704,667	1,737,866	1,771,710	1,806,214	1,841,389	1,877,250	1,913,808	1,951,079
17	1,633,460	1,666,732	1,700,679	1,735,315	1,770,654	1,806,711	1,843,499	1,881,033	1,919,329
18	1,594,578	1,627,029	1,660,137	1,693,918	1,728,383	1,763,547	1,799,423	1,836,028	1,873,374
19	1,555,466	1,586,002	1,617,139	1,648,886	1,681,255	1,714,260	1,747,913	1,782,226	1,817,212

B. Beers Six Term Modified Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,910,348	1,925,033	1,939,579	1,953,976	1,968,212	1,982,276	1,996,156	2,009,840	2,023,315
1	1,937,195	1,950,435	1,963,471	1,976,290	1,988,879	2,001,225	2,013,313	2,025,130	2,036,659
2	1,957,315	1,969,557	1,981,549	1,993,277	2,004,727	2,015,884	2,026,731	2,037,254	2,047,436
3	1,970,707	1,982,398	1,993,813	2,004,938	2,015,756	2,026,253	2,036,411	2,046,215	2,055,646
4	1,977,371	1,988,959	2,000,263	2,011,271	2,021,966	2,032,332	2,042,352	2,052,010	2,061,288
5	1,977,348	1,989,278	2,000,939	2,012,317	2,023,395	2,034,159	2,044,592	2,054,678	2,064,399
6	1,970,770	1,983,483	1,995,960	2,008,187	2,020,149	2,031,832	2,043,221	2,054,300	2,065,052
7	1,957,903	1,971,810	1,985,531	1,999,054	2,012,366	2,025,453	2,038,303	2,050,902	2,063,234
8	1,939,159	1,954,645	1,970,012	1,985,250	2,000,348	2,015,296	2,030,082	2,044,694	2,059,121
9	1,915,218	1,932,611	1,949,968	1,967,279	1,984,539	2,001,736	2,018,865	2,035,914	2,052,875
10	1,886,823	1,906,386	1,926,005	1,945,677	1,965,394	1,985,153	2,004,947	2,024,771	2,044,618
11	1,854,904	1,876,801	1,898,857	1,921,068	1,943,433	1,965,949	1,988,615	2,011,428	2,034,384
12	1,820,496	1,844,767	1,869,299	1,894,094	1,919,153	1,944,477	1,970,066	1,995,922	2,022,046
13	1,784,524	1,811,060	1,837,958	1,865,221	1,892,854	1,920,862	1,949,247	1,978,015	2,007,170
14	1,747,715	1,776,261	1,805,260	1,834,717	1,864,640	1,895,037	1,925,913	1,957,277	1,989,136
15	1,710,479	1,740,513	1,771,070	1,802,159	1,833,789	1,865,969	1,898,710	1,932,020	1,965,909
16	1,672,808	1,703,688	1,735,137	1,767,165	1,799,784	1,833,004	1,866,836	1,901,292	1,936,382
17	1,634,282	1,665,391	1,697,092	1,729,396	1,762,316	1,795,862	1,830,046	1,864,881	1,900,379
18	1,595,164	1,625,903	1,657,234	1,689,168	1,721,718	1,754,895	1,788,712	1,823,180	1,858,312
19	1,555,688	1,585,554	1,615,992	1,647,015	1,678,634	1,710,859	1,743,703	1,777,178	1,811,295

C. Sprague Fifth-Difference Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,894,985	1,911,506	1,927,964	1,944,351	1,960,658	1,976,876	1,992,995	2,009,006	2,024,899
1	1,933,348	1,947,050	1,960,567	1,973,886	1,986,996	1,999,884	2,012,535	2,024,937	2,037,075
2	1,960,725	1,972,559	1,984,126	1,995,412	2,006,401	2,017,079	2,027,430	2,037,436	2,047,080
3	1,977,964	1,988,785	1,999,294	2,009,476	2,019,313	2,028,789	2,037,887	2,046,588	2,054,874
4	1,985,915	1,996,482	2,006,725	2,016,627	2,026,171	2,035,340	2,044,116	2,052,481	2,060,416
5	1,985,428	1,996,403	2,007,070	2,017,413	2,027,414	2,037,058	2,046,327	2,055,203	2,063,667
6	1,977,351	1,989,302	2,000,984	2,012,383	2,023,483	2,034,271	2,044,728	2,054,839	2,064,586
7	1,962,535	1,975,930	1,989,117	2,002,084	2,014,818	2,027,303	2,039,528	2,051,476	2,063,133
8	1,941,829	1,957,042	1,972,124	1,987,066	2,001,856	2,016,484	2,030,936	2,045,202	2,059,268
9	1,916,082	1,933,390	1,950,657	1,967,877	1,985,040	2,002,138	2,019,162	2,036,103	2,052,952
10	1,885,501	1,905,090	1,924,737	1,944,437	1,964,186	1,983,977	2,003,805	2,023,664	2,043,549
11	1,850,296	1,872,258	1,894,383	1,916,669	1,939,112	1,961,712	1,984,466	2,007,371	2,030,426
12	1,814,522	1,838,834	1,863,411	1,888,255	1,913,366	1,938,747	1,964,398	1,990,319	2,016,513
13	1,780,312	1,806,843	1,833,737	1,860,998	1,888,630	1,916,638	1,945,026	1,973,798	2,002,959
14	1,746,592	1,775,128	1,804,117	1,833,566	1,863,480	1,893,867	1,924,735	1,956,090	1,987,940
15	1,710,263	1,740,779	1,771,836	1,803,445	1,835,614	1,868,354	1,901,674	1,935,586	1,970,099
16	1,672,079	1,704,707	1,737,972	1,771,886	1,806,461	1,841,711	1,877,648	1,914,287	1,951,640
17	1,633,375	1,666,871	1,701,051	1,735,929	1,771,519	1,807,836	1,844,894	1,882,708	1,921,294
18	1,594,554	1,627,069	1,660,244	1,694,093	1,728,630	1,763,868	1,799,822	1,836,506	1,873,936
19	1,555,533	1,585,893	1,616,846	1,648,403	1,680,576	1,713,376	1,746,817	1,780,910	1,815,668

Table A3. Estimated School Age Population using the official 2000 census as base population and the the 2000 and 2010 census annual population growth rate: Philippines, 2001-2009

Scenario 1: Applying the 2000 census age structure									
A. Beers Six Term Ordinary Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,944,506	1,963,200	2,000,828	2,039,177	2,078,261	2,118,094	2,158,691	2,200,066	2,220,883
1	1,976,878	1,995,883	2,034,138	2,073,125	2,112,860	2,153,357	2,194,629	2,236,693	2,257,856
2	2,001,532	2,020,774	2,059,506	2,098,980	2,139,210	2,180,211	2,221,999	2,264,587	2,286,014
3	2,018,399	2,037,804	2,076,861	2,116,668	2,157,237	2,198,584	2,240,723	2,283,671	2,305,279
4	2,027,411	2,046,901	2,086,134	2,126,118	2,166,868	2,208,400	2,250,727	2,293,866	2,315,571
5	2,028,456	2,047,957	2,087,209	2,127,214	2,167,985	2,209,538	2,251,888	2,295,049	2,316,765
6	2,021,466	2,040,900	2,080,017	2,119,884	2,160,515	2,201,925	2,244,128	2,287,141	2,308,782
7	2,006,498	2,025,788	2,064,615	2,104,187	2,144,517	2,185,620	2,227,511	2,270,205	2,291,686
8	1,983,814	2,002,886	2,041,274	2,080,399	2,120,273	2,160,911	2,202,329	2,244,540	2,265,778
9	1,954,301	1,973,089	2,010,906	2,049,448	2,088,729	2,128,763	2,169,564	2,211,148	2,232,070
10	1,919,508	1,937,962	1,975,106	2,012,962	2,051,544	2,090,865	2,130,940	2,171,782	2,192,332
11	1,881,568	1,899,657	1,936,067	1,973,174	2,010,993	2,049,537	2,088,820	2,128,856	2,148,999
12	1,842,860	1,860,577	1,896,238	1,932,582	1,969,623	2,007,374	2,045,849	2,085,061	2,104,790
13	1,805,060	1,822,413	1,857,343	1,892,942	1,929,223	1,966,200	2,003,885	2,042,293	2,061,617
14	1,767,766	1,784,761	1,818,969	1,853,832	1,889,364	1,925,577	1,962,484	2,000,098	2,019,023
15	1,728,652	1,745,271	1,778,722	1,812,814	1,847,560	1,882,971	1,919,061	1,955,843	1,974,349
16	1,687,616	1,703,840	1,736,497	1,769,780	1,803,701	1,838,272	1,873,505	1,909,414	1,927,481
17	1,647,168	1,663,004	1,694,878	1,727,363	1,760,471	1,794,213	1,828,602	1,863,650	1,881,284
18	1,607,990	1,623,448	1,654,564	1,686,277	1,718,597	1,751,537	1,785,108	1,819,322	1,836,537
19	1,569,655	1,584,745	1,615,119	1,646,076	1,677,625	1,709,780	1,742,550	1,775,949	1,792,753

B. Beers Six Term Modified Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,950,379	1,969,129	2,006,870	2,045,335	2,084,537	2,124,491	2,165,210	2,206,710	2,227,590
1	1,979,425	1,998,454	2,036,758	2,075,796	2,115,582	2,156,130	2,197,456	2,239,574	2,260,765
2	2,001,108	2,020,346	2,059,070	2,098,535	2,138,757	2,179,750	2,221,528	2,264,107	2,285,530
3	2,015,429	2,034,804	2,073,805	2,113,553	2,154,062	2,195,348	2,237,426	2,280,310	2,301,886
4	2,022,386	2,041,829	2,080,964	2,120,849	2,161,498	2,202,927	2,245,149	2,288,181	2,309,832
5	2,022,022	2,041,461	2,080,589	2,120,467	2,161,109	2,202,530	2,244,745	2,287,769	2,309,416
6	2,014,480	2,033,846	2,072,828	2,112,558	2,153,048	2,194,315	2,236,372	2,279,236	2,300,802
7	2,000,063	2,019,291	2,057,994	2,097,439	2,137,639	2,178,611	2,220,367	2,262,924	2,284,336
8	1,979,221	1,998,248	2,036,548	2,075,581	2,115,363	2,155,908	2,197,229	2,239,343	2,260,531
9	1,952,706	1,971,478	2,009,265	2,047,776	2,087,025	2,127,026	2,167,794	2,209,343	2,230,248
10	1,921,350	1,939,822	1,977,001	2,014,894	2,053,512	2,092,871	2,132,985	2,173,867	2,194,436
11	1,886,207	1,904,340	1,940,840	1,978,039	2,015,952	2,054,591	2,093,970	2,134,105	2,154,298
12	1,848,464	1,866,235	1,902,004	1,938,459	1,975,613	2,013,479	2,052,070	2,091,401	2,111,190
13	1,809,221	1,826,614	1,861,625	1,897,306	1,933,670	1,970,732	2,008,505	2,047,001	2,066,370
14	1,769,370	1,786,380	1,820,619	1,855,514	1,891,078	1,927,323	1,964,263	2,001,912	2,020,854
15	1,729,595	1,746,223	1,779,692	1,813,803	1,848,567	1,883,998	1,920,108	1,956,910	1,975,426
16	1,690,011	1,706,258	1,738,961	1,772,291	1,806,260	1,840,880	1,876,163	1,912,123	1,930,216
17	1,650,157	1,666,021	1,697,953	1,730,497	1,763,665	1,797,468	1,831,920	1,867,031	1,884,697
18	1,610,288	1,625,769	1,656,930	1,688,687	1,721,054	1,754,041	1,787,660	1,821,923	1,839,162
19	1,570,550	1,585,648	1,616,040	1,647,014	1,678,582	1,710,754	1,743,544	1,776,962	1,793,775

C. Sprague Fifth-Difference Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,932,758	1,951,339	1,988,740	2,026,857	2,065,705	2,105,298	2,145,649	2,186,774	2,207,465
1	1,975,010	1,993,997	2,032,216	2,071,166	2,110,864	2,151,322	2,192,555	2,234,579	2,255,723
2	2,005,019	2,024,295	2,063,094	2,102,636	2,142,937	2,184,010	2,225,870	2,268,532	2,289,997
3	2,023,754	2,043,210	2,082,371	2,122,284	2,162,961	2,204,417	2,246,668	2,289,729	2,311,395
4	2,032,184	2,051,721	2,091,046	2,131,124	2,171,970	2,213,600	2,256,027	2,299,267	2,321,023
5	2,031,279	2,050,807	2,090,114	2,130,174	2,171,002	2,212,613	2,255,021	2,298,243	2,319,989
6	2,022,006	2,041,445	2,080,572	2,120,450	2,161,092	2,202,513	2,244,727	2,287,751	2,309,398
7	2,005,336	2,024,614	2,063,419	2,102,968	2,143,275	2,184,354	2,226,221	2,268,890	2,290,358
8	1,982,237	2,001,293	2,039,651	2,078,744	2,118,587	2,159,193	2,200,577	2,242,755	2,263,976
9	1,953,678	1,972,460	2,010,265	2,048,795	2,088,064	2,128,085	2,168,873	2,210,443	2,231,358
10	1,919,965	1,938,423	1,975,576	2,013,441	2,052,032	2,091,362	2,131,446	2,172,299	2,192,853
11	1,881,402	1,899,489	1,935,896	1,973,000	2,010,816	2,049,357	2,088,636	2,128,668	2,148,809
12	1,842,279	1,859,990	1,895,640	1,931,973	1,969,002	2,006,741	2,045,204	2,084,403	2,104,126
13	1,804,894	1,822,245	1,857,172	1,892,767	1,929,045	1,966,019	2,003,701	2,042,105	2,061,427
14	1,768,223	1,785,222	1,819,439	1,854,311	1,889,852	1,926,074	1,962,990	2,000,614	2,019,544
15	1,728,896	1,745,517	1,778,973	1,813,069	1,847,820	1,883,236	1,919,332	1,956,119	1,974,628
16	1,687,528	1,703,751	1,736,406	1,769,687	1,803,606	1,838,175	1,873,407	1,909,314	1,927,380
17	1,646,858	1,662,691	1,694,559	1,727,038	1,760,139	1,793,875	1,828,258	1,863,299	1,880,930
18	1,607,901	1,623,359	1,654,473	1,686,184	1,718,502	1,751,440	1,785,010	1,819,222	1,836,436
19	1,569,898	1,584,991	1,615,370	1,646,331	1,677,886	1,710,045	1,742,821	1,776,225	1,793,031

Scenario 2: Applying the 2010 census age structure

A. Beers Six Term Ordinary Formula (with a 3-year moving average)

Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,745,449	1,762,229	1,796,005	1,830,428	1,865,511	1,901,267	1,937,708	1,974,847	1,993,533
1	1,745,070	1,761,846	1,795,615	1,830,030	1,865,106	1,900,854	1,937,287	1,974,418	1,993,100
2	1,747,356	1,764,154	1,797,967	1,832,428	1,867,550	1,903,344	1,939,825	1,977,005	1,995,711
3	1,751,382	1,768,219	1,802,110	1,836,650	1,871,853	1,907,730	1,944,295	1,981,560	2,000,310
4	1,756,223	1,773,107	1,807,091	1,841,727	1,877,027	1,913,003	1,949,669	1,987,037	2,005,839
5	1,760,921	1,777,850	1,811,925	1,846,654	1,882,048	1,918,121	1,954,884	1,992,353	2,011,205
6	1,764,552	1,781,515	1,815,661	1,850,461	1,885,928	1,922,075	1,958,915	1,996,461	2,015,351
7	1,766,282	1,783,262	1,817,441	1,852,276	1,887,777	1,923,960	1,960,836	1,998,418	2,017,327
8	1,765,436	1,782,408	1,816,571	1,851,388	1,886,873	1,923,038	1,959,896	1,997,461	2,016,361
9	1,761,805	1,778,742	1,812,835	1,847,580	1,882,992	1,919,083	1,955,865	1,993,353	2,012,214
10	1,755,679	1,772,557	1,806,531	1,841,156	1,876,445	1,912,410	1,949,065	1,986,422	2,005,217
11	1,747,785	1,764,587	1,798,408	1,832,878	1,868,008	1,903,811	1,940,301	1,977,490	1,996,201
12	1,739,036	1,755,754	1,789,406	1,823,703	1,858,657	1,894,281	1,930,588	1,967,591	1,986,208
13	1,729,815	1,746,445	1,779,919	1,814,034	1,848,803	1,884,238	1,920,352	1,957,159	1,975,678
14	1,718,949	1,735,475	1,768,738	1,802,638	1,837,189	1,872,402	1,908,289	1,944,865	1,963,267
15	1,707,983	1,724,403	1,757,454	1,791,139	1,825,469	1,860,457	1,896,115	1,932,458	1,950,742
16	1,692,725	1,708,998	1,741,754	1,775,138	1,809,161	1,843,837	1,879,177	1,915,194	1,933,316
17	1,666,623	1,682,645	1,714,896	1,747,765	1,781,263	1,815,404	1,850,199	1,885,661	1,903,504
18	1,626,690	1,642,328	1,673,806	1,705,887	1,738,583	1,771,906	1,805,868	1,840,480	1,857,895
19	1,576,826	1,591,985	1,622,498	1,653,596	1,685,290	1,717,591	1,750,511	1,784,063	1,800,944

B. Beers Six Term Modified Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,733,143	1,749,805	1,783,343	1,817,523	1,852,359	1,887,863	1,924,047	1,960,924	1,979,478
1	1,742,776	1,759,530	1,793,254	1,827,625	1,862,654	1,898,355	1,934,740	1,971,823	1,990,480
2	1,750,752	1,767,583	1,801,462	1,835,990	1,871,179	1,907,044	1,943,595	1,980,847	1,999,590
3	1,757,072	1,773,964	1,807,965	1,842,618	1,877,934	1,913,928	1,950,611	1,987,998	2,006,809
4	1,761,736	1,778,673	1,812,764	1,847,509	1,882,919	1,919,008	1,955,789	1,993,275	2,012,136
5	1,764,775	1,781,741	1,815,891	1,850,696	1,886,167	1,922,319	1,959,163	1,996,714	2,015,607
6	1,766,243	1,783,223	1,817,401	1,852,235	1,887,736	1,923,917	1,960,792	1,998,374	2,017,283
7	1,766,093	1,783,071	1,817,247	1,852,077	1,887,575	1,923,754	1,960,626	1,998,204	2,017,111
8	1,764,444	1,781,407	1,815,551	1,850,349	1,885,814	1,921,958	1,958,796	1,996,339	2,015,229
9	1,761,372	1,778,305	1,812,389	1,847,126	1,882,529	1,918,611	1,955,384	1,992,863	2,011,719
10	1,756,898	1,773,788	1,807,786	1,842,435	1,877,748	1,913,738	1,950,418	1,987,801	2,006,610
11	1,750,940	1,767,773	1,801,656	1,836,187	1,871,381	1,907,249	1,943,804	1,981,061	1,999,805
12	1,743,244	1,760,003	1,793,736	1,828,116	1,863,155	1,898,865	1,935,260	1,972,352	1,991,015
13	1,733,268	1,749,931	1,783,471	1,817,655	1,852,493	1,887,999	1,924,185	1,961,066	1,979,621
14	1,720,317	1,736,856	1,770,145	1,804,073	1,838,651	1,873,892	1,909,808	1,946,412	1,964,829
15	1,702,353	1,718,719	1,751,661	1,785,234	1,819,451	1,854,324	1,889,865	1,926,087	1,944,312
16	1,678,297	1,694,431	1,726,908	1,760,007	1,793,740	1,828,120	1,863,159	1,898,869	1,916,837
17	1,648,029	1,663,872	1,695,763	1,728,265	1,761,390	1,795,150	1,829,557	1,864,624	1,882,267
18	1,611,919	1,627,415	1,658,607	1,690,397	1,722,796	1,755,816	1,789,469	1,823,768	1,841,024
19	1,571,024	1,586,128	1,616,528	1,647,512	1,679,089	1,711,271	1,744,071	1,777,499	1,794,317

C. Sprague Fifth-Difference Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,736,627	1,753,322	1,786,928	1,821,177	1,856,083	1,891,658	1,927,914	1,964,866	1,983,457
1	1,743,667	1,760,430	1,794,171	1,828,559	1,863,607	1,899,326	1,935,729	1,972,831	1,991,498
2	1,749,974	1,766,798	1,800,662	1,835,174	1,870,348	1,906,196	1,942,732	1,979,967	1,998,702
3	1,755,403	1,772,279	1,806,248	1,840,868	1,876,151	1,912,110	1,948,759	1,986,110	2,004,903
4	1,759,808	1,776,726	1,810,780	1,845,486	1,880,858	1,916,908	1,953,648	1,991,093	2,009,933
5	1,763,041	1,779,990	1,814,107	1,848,877	1,884,314	1,920,430	1,957,238	1,994,751	2,013,626
6	1,764,957	1,781,925	1,816,078	1,850,886	1,886,361	1,922,516	1,959,365	1,996,919	2,015,814
7	1,765,409	1,782,381	1,816,543	1,851,360	1,886,845	1,923,009	1,959,867	1,997,431	2,016,330
8	1,764,251	1,781,212	1,815,352	1,850,146	1,885,607	1,921,748	1,958,581	1,996,121	2,015,008
9	1,761,337	1,778,270	1,812,353	1,847,090	1,882,493	1,918,574	1,955,346	1,992,824	2,011,680
10	1,756,022	1,772,903	1,806,884	1,841,516	1,876,812	1,912,784	1,949,445	1,986,810	2,005,609
11	1,747,660	1,764,461	1,798,280	1,832,747	1,867,874	1,903,675	1,940,162	1,977,349	1,996,058
12	1,738,599	1,755,313	1,788,957	1,823,245	1,858,190	1,893,806	1,930,104	1,967,097	1,985,710
13	1,729,691	1,746,319	1,779,790	1,813,903	1,848,669	1,884,102	1,920,214	1,957,018	1,975,535
14	1,719,292	1,735,821	1,769,091	1,802,998	1,837,555	1,872,775	1,908,670	1,945,253	1,963,659
15	1,706,468	1,722,873	1,755,895	1,789,550	1,823,849	1,858,806	1,894,433	1,930,743	1,949,012
16	1,693,276	1,709,555	1,742,321	1,775,716	1,809,750	1,844,437	1,879,788	1,915,818	1,933,945
17	1,668,551	1,684,592	1,716,880	1,749,787	1,783,324	1,817,505	1,852,340	1,887,843	1,905,706
18	1,627,241	1,642,884	1,674,373	1,706,465	1,739,172	1,772,506	1,806,479	1,841,103	1,858,524
19	1,575,311	1,590,455	1,620,939	1,652,007	1,683,670	1,715,941	1,748,829	1,782,349	1,799,213

Scenario 3: Applying the average of the 2000 and 2010 census age structures

A. Beers Six Term Ordinary Formula (with a 3-year moving average)

Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,844,978	1,862,714	1,898,416	1,934,803	1,971,886	2,009,681	2,048,199	2,087,457	2,107,208
1	1,860,974	1,878,865	1,914,876	1,951,578	1,988,983	2,027,105	2,065,958	2,105,555	2,125,478
2	1,874,444	1,892,464	1,928,736	1,965,704	2,003,380	2,041,778	2,080,912	2,120,796	2,140,863
3	1,884,891	1,903,011	1,939,486	1,976,659	2,014,545	2,053,157	2,092,509	2,132,615	2,152,794
4	1,891,817	1,910,004	1,946,612	1,983,922	2,021,947	2,060,701	2,100,198	2,140,452	2,160,705
5	1,894,689	1,912,903	1,949,567	1,986,934	2,025,017	2,063,829	2,103,386	2,143,701	2,163,985
6	1,893,009	1,911,208	1,947,839	1,985,173	2,023,222	2,062,000	2,101,522	2,141,801	2,162,066
7	1,886,390	1,904,525	1,941,028	1,978,231	2,016,147	2,054,790	2,094,173	2,134,312	2,154,507
8	1,874,625	1,892,647	1,928,923	1,965,893	2,003,573	2,041,975	2,081,113	2,121,000	2,141,069
9	1,858,053	1,875,915	1,911,870	1,948,514	1,985,861	2,023,923	2,062,715	2,102,250	2,122,142
10	1,837,593	1,855,259	1,890,818	1,927,059	1,963,994	2,001,637	2,040,002	2,079,102	2,098,775
11	1,814,676	1,832,122	1,867,237	1,903,026	1,939,501	1,976,674	2,014,560	2,053,173	2,072,600
12	1,790,948	1,808,165	1,842,822	1,878,142	1,914,140	1,950,828	1,988,218	2,026,326	2,045,499
13	1,767,438	1,784,429	1,818,631	1,853,488	1,889,013	1,925,219	1,962,119	1,999,726	2,018,647
14	1,743,358	1,760,118	1,793,853	1,828,235	1,863,276	1,898,989	1,935,386	1,972,481	1,991,145
15	1,718,318	1,734,837	1,768,088	1,801,976	1,836,514	1,871,714	1,907,588	1,944,150	1,962,546
16	1,690,171	1,706,419	1,739,126	1,772,459	1,806,431	1,841,054	1,876,341	1,912,304	1,930,398
17	1,656,896	1,672,824	1,704,887	1,737,564	1,770,867	1,804,809	1,839,401	1,874,656	1,892,394
18	1,617,340	1,632,888	1,664,185	1,696,082	1,728,590	1,761,721	1,795,488	1,829,901	1,847,216
19	1,573,240	1,588,365	1,618,809	1,649,836	1,681,457	1,713,685	1,746,531	1,780,006	1,796,848

B. Beers Six Term Modified Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,841,761	1,859,467	1,895,107	1,931,429	1,968,448	2,006,177	2,044,629	2,083,817	2,103,534
1	1,861,100	1,878,992	1,915,006	1,951,710	1,989,118	2,027,243	2,066,098	2,105,698	2,125,622
2	1,875,930	1,893,965	1,930,266	1,967,262	2,004,968	2,043,397	2,082,562	2,122,477	2,142,560
3	1,886,250	1,904,384	1,940,885	1,978,085	2,015,998	2,054,638	2,094,019	2,134,154	2,154,347
4	1,892,061	1,910,251	1,946,864	1,984,179	2,022,209	2,060,968	2,100,469	2,140,728	2,160,984
5	1,893,399	1,911,601	1,948,240	1,985,581	2,023,638	2,062,424	2,101,954	2,142,242	2,162,511
6	1,890,361	1,908,535	1,945,115	1,982,396	2,020,392	2,059,116	2,098,582	2,138,805	2,159,042
7	1,883,078	1,901,181	1,937,620	1,974,758	2,012,607	2,051,182	2,090,496	2,130,564	2,150,724
8	1,871,832	1,889,828	1,926,049	1,962,965	2,000,588	2,038,933	2,078,012	2,117,841	2,137,880
9	1,857,039	1,874,891	1,910,827	1,947,451	1,984,777	2,022,818	2,061,589	2,101,103	2,120,983
10	1,839,124	1,856,805	1,892,394	1,928,664	1,965,630	2,003,305	2,041,702	2,080,834	2,100,523
11	1,818,574	1,836,057	1,871,248	1,907,113	1,943,666	1,980,920	2,018,887	2,057,583	2,077,051
12	1,795,854	1,813,119	1,847,870	1,883,288	1,919,384	1,956,172	1,993,665	2,031,877	2,051,103
13	1,771,245	1,788,273	1,822,548	1,857,480	1,893,082	1,929,366	1,966,345	2,004,033	2,022,995
14	1,744,843	1,761,618	1,795,382	1,829,793	1,864,864	1,900,607	1,937,036	1,974,162	1,992,842
15	1,715,974	1,732,471	1,765,676	1,799,518	1,834,009	1,869,161	1,904,986	1,941,498	1,959,869
16	1,684,154	1,700,345	1,732,934	1,766,149	1,800,000	1,834,500	1,869,661	1,905,496	1,923,526
17	1,649,093	1,664,947	1,696,858	1,729,381	1,762,527	1,796,309	1,830,738	1,865,827	1,883,482
18	1,611,104	1,626,592	1,657,768	1,689,542	1,721,925	1,754,928	1,788,565	1,822,845	1,840,093
19	1,570,787	1,585,888	1,616,284	1,647,263	1,678,835	1,711,013	1,743,807	1,777,230	1,794,046

C. Sprague Fifth-Difference Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,834,693	1,852,331	1,887,834	1,924,017	1,960,894	1,998,478	2,036,782	2,075,820	2,095,461
1	1,859,339	1,877,214	1,913,193	1,949,863	1,987,235	2,025,324	2,064,142	2,103,705	2,123,610
2	1,877,497	1,895,546	1,931,878	1,968,905	2,006,643	2,045,103	2,084,301	2,124,250	2,144,349
3	1,889,579	1,907,745	1,944,310	1,981,576	2,019,556	2,058,264	2,097,714	2,137,920	2,158,149
4	1,895,996	1,914,224	1,950,913	1,988,305	2,026,414	2,065,254	2,104,838	2,145,180	2,165,478
5	1,897,160	1,915,398	1,952,110	1,989,525	2,027,658	2,066,521	2,106,130	2,146,497	2,166,807
6	1,893,481	1,911,685	1,948,325	1,985,668	2,023,727	2,062,515	2,102,046	2,142,335	2,162,606
7	1,885,372	1,903,498	1,939,981	1,977,164	2,015,060	2,053,682	2,093,044	2,133,160	2,153,344
8	1,873,244	1,891,253	1,927,502	1,964,445	2,002,097	2,040,470	2,079,579	2,119,438	2,139,492
9	1,857,508	1,875,365	1,911,309	1,947,943	1,985,278	2,023,329	2,062,110	2,101,633	2,121,519
10	1,837,993	1,855,663	1,891,230	1,927,478	1,964,422	2,002,073	2,040,446	2,079,554	2,099,231
11	1,814,531	1,831,975	1,867,088	1,902,874	1,939,345	1,976,516	2,014,399	2,053,008	2,072,434
12	1,790,439	1,807,652	1,842,298	1,877,609	1,913,596	1,950,273	1,987,654	2,025,750	2,044,918
13	1,767,292	1,784,282	1,818,481	1,853,335	1,888,857	1,925,060	1,961,957	1,999,561	2,018,481
14	1,743,758	1,760,521	1,794,265	1,828,655	1,863,704	1,899,425	1,935,830	1,972,934	1,991,601
15	1,717,682	1,734,195	1,767,434	1,801,310	1,835,835	1,871,021	1,906,883	1,943,431	1,961,820
16	1,690,402	1,706,653	1,739,364	1,772,701	1,806,678	1,841,306	1,876,598	1,912,566	1,930,662
17	1,657,705	1,673,641	1,705,719	1,738,412	1,771,732	1,805,690	1,840,299	1,875,571	1,893,318
18	1,617,571	1,633,122	1,664,423	1,696,325	1,728,837	1,761,973	1,795,744	1,830,163	1,847,480
19	1,572,605	1,587,723	1,618,154	1,649,169	1,680,778	1,712,993	1,745,825	1,779,287	1,796,122

Scenario 4: Getting the difference in the age structure (2000 census and 2010 census); dividing the difference by 10 to get the yearly increment. Computing the yearly age structure by adding the yearly increment. Applying the computed yearly age structure to the computed yearly total population.

A. Beers Six Term Ordinary Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,914,553	1,922,751	1,939,122	1,955,413	1,971,617	1,987,724	2,003,723	2,019,606	2,027,528
1	1,941,997	1,948,780	1,962,279	1,975,580	1,988,670	2,001,535	2,014,164	2,026,541	2,032,688
2	1,963,285	1,969,126	1,980,713	1,992,022	2,003,036	2,013,741	2,024,120	2,034,157	2,039,119
3	1,978,220	1,983,545	1,994,088	2,004,306	2,014,184	2,023,703	2,032,848	2,041,600	2,045,910
4	1,986,604	1,991,796	2,002,068	2,012,001	2,021,581	2,030,788	2,039,605	2,048,015	2,052,151
5	1,988,199	1,993,593	2,004,276	2,014,635	2,024,655	2,034,319	2,043,610	2,052,509	2,056,894
6	1,982,807	1,988,695	2,000,376	2,011,774	2,022,874	2,033,661	2,044,118	2,054,229	2,059,226
7	1,970,352	1,976,976	1,990,150	2,003,104	2,015,822	2,028,293	2,040,501	2,052,432	2,058,351
8	1,950,954	1,958,511	1,973,579	1,988,505	2,003,278	2,017,886	2,032,319	2,046,564	2,053,655
9	1,925,335	1,933,973	1,951,234	1,968,446	1,985,600	2,002,690	2,019,705	2,036,636	2,045,088
10	1,894,856	1,904,671	1,924,320	1,944,022	1,963,773	1,983,566	2,003,397	2,023,259	2,033,196
11	1,861,437	1,872,472	1,894,595	1,916,878	1,939,320	1,961,917	1,984,669	2,007,571	2,019,048
12	1,827,237	1,839,479	1,864,053	1,888,893	1,914,000	1,939,375	1,965,020	1,990,936	2,003,939
13	1,793,737	1,807,123	1,834,017	1,861,279	1,888,911	1,916,919	1,945,306	1,974,078	1,988,528
14	1,760,421	1,774,841	1,803,836	1,833,290	1,863,210	1,893,604	1,924,479	1,955,841	1,971,604
15	1,725,542	1,741,071	1,772,315	1,804,116	1,836,486	1,869,434	1,902,970	1,937,105	1,954,272
16	1,688,385	1,704,879	1,738,081	1,771,930	1,806,438	1,841,618	1,877,482	1,914,046	1,932,443
17	1,650,096	1,666,957	1,700,909	1,735,549	1,770,893	1,806,954	1,843,747	1,881,287	1,900,181
18	1,610,804	1,627,248	1,660,361	1,694,146	1,728,616	1,763,784	1,799,666	1,836,275	1,854,701
19	1,570,734	1,586,202	1,617,342	1,649,093	1,681,467	1,714,476	1,748,133	1,782,450	1,799,719

B. Beers Six Term Modified Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,917,690	1,924,986	1,939,529	1,953,922	1,968,155	1,982,215	1,996,091	2,009,770	2,016,577
1	1,943,815	1,950,367	1,963,399	1,976,213	1,988,798	2,001,139	2,013,222	2,025,034	2,030,894
2	1,963,436	1,969,474	1,981,461	1,993,185	2,004,629	2,015,781	2,026,623	2,037,141	2,042,345
3	1,976,553	1,982,306	1,993,716	2,004,836	2,015,649	2,026,140	2,036,293	2,046,090	2,050,930
4	1,983,165	1,988,864	2,000,164	2,011,167	2,021,856	2,032,216	2,042,231	2,051,883	2,056,649
5	1,983,313	1,989,188	2,000,845	2,012,217	2,023,290	2,034,049	2,044,476	2,054,556	2,059,539
6	1,977,127	1,983,405	1,995,877	2,008,099	2,020,056	2,031,734	2,043,117	2,054,191	2,059,676
7	1,964,856	1,971,748	1,985,465	1,998,983	2,012,291	2,025,374	2,038,219	2,050,813	2,057,068
8	1,946,902	1,954,605	1,969,969	1,985,203	2,000,298	2,015,242	2,030,024	2,044,632	2,051,908
9	1,923,915	1,932,599	1,949,953	1,967,262	1,984,518	2,001,713	2,018,838	2,035,885	2,044,395
10	1,896,604	1,906,405	1,926,023	1,945,692	1,965,408	1,985,165	2,004,957	2,024,779	2,034,695
11	1,865,853	1,876,854	1,898,909	1,921,119	1,943,483	1,965,999	1,988,664	2,011,476	2,022,906
12	1,832,631	1,844,854	1,869,387	1,894,182	1,919,241	1,944,565	1,970,155	1,996,012	2,008,984
13	1,797,792	1,811,181	1,838,080	1,865,344	1,892,979	1,920,988	1,949,375	1,978,144	1,992,592
14	1,761,988	1,776,412	1,805,413	1,834,872	1,864,798	1,895,197	1,926,076	1,957,442	1,973,206
15	1,725,496	1,740,687	1,771,247	1,802,339	1,833,972	1,866,156	1,898,899	1,932,213	1,948,964
16	1,688,248	1,703,878	1,735,330	1,767,362	1,799,984	1,833,208	1,867,044	1,901,503	1,918,837
17	1,649,837	1,665,588	1,697,293	1,729,601	1,762,525	1,796,074	1,830,263	1,865,102	1,882,630
18	1,610,534	1,626,100	1,657,435	1,689,373	1,721,927	1,755,108	1,788,929	1,823,401	1,840,746
19	1,570,621	1,585,745	1,616,187	1,647,214	1,678,836	1,711,065	1,743,913	1,777,392	1,794,236

C. Sprague Fifth-Difference Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,903,246	1,911,485	1,927,941	1,944,325	1,960,629	1,976,843	1,992,959	2,008,967	2,016,952
1	1,940,199	1,946,988	1,960,501	1,973,817	1,986,922	1,999,805	2,012,452	2,024,849	2,031,006
2	1,966,642	1,972,470	1,984,032	1,995,313	2,006,298	2,016,970	2,027,315	2,037,315	2,042,258
3	1,983,374	1,988,681	1,999,185	2,009,361	2,019,193	2,028,663	2,037,755	2,046,450	2,050,731
4	1,991,199	1,996,374	2,006,611	2,016,507	2,026,046	2,035,209	2,043,979	2,052,338	2,056,449
5	1,990,916	1,996,301	2,006,962	2,017,299	2,027,295	2,036,933	2,046,196	2,055,066	2,059,435
6	1,983,327	1,989,212	2,000,889	2,012,283	2,023,379	2,034,161	2,044,612	2,054,717	2,059,712
7	1,969,233	1,975,861	1,989,044	2,002,006	2,014,735	2,027,216	2,039,436	2,051,379	2,057,304
8	1,949,435	1,956,998	1,972,078	1,987,016	2,001,802	2,016,425	2,030,874	2,045,135	2,052,235
9	1,924,736	1,933,376	1,950,641	1,967,858	1,985,018	2,002,113	2,019,134	2,036,072	2,044,527
10	1,895,296	1,905,109	1,924,755	1,944,453	1,964,200	1,983,989	2,003,815	2,023,673	2,033,607
11	1,861,277	1,872,312	1,894,437	1,916,721	1,939,164	1,961,763	1,984,516	2,007,421	2,018,899
12	1,826,678	1,838,922	1,863,500	1,888,344	1,913,456	1,938,837	1,964,488	1,990,410	2,003,416
13	1,793,578	1,806,964	1,833,859	1,861,122	1,888,756	1,916,765	1,945,154	1,973,928	1,988,378
14	1,760,860	1,775,279	1,804,271	1,833,721	1,863,638	1,894,027	1,924,897	1,956,255	1,972,015
15	1,725,521	1,740,960	1,772,020	1,803,632	1,835,804	1,868,547	1,901,871	1,935,786	1,952,842
16	1,688,393	1,704,919	1,738,188	1,772,106	1,806,686	1,841,940	1,877,882	1,914,525	1,932,963
17	1,650,123	1,667,099	1,701,283	1,736,166	1,771,761	1,808,083	1,845,146	1,882,965	1,902,001
18	1,610,811	1,627,289	1,660,468	1,694,322	1,728,863	1,764,107	1,800,066	1,836,755	1,855,221
19	1,570,713	1,586,091	1,617,048	1,648,609	1,680,785	1,713,590	1,747,034	1,781,132	1,798,289

Table A4. Adjusted Population Count for 2000 Census by five-year age groups

Population by five-year age groups: Philippines, 2010				Survival rates S(X,N) based on 2000 census			Adjusted population by age groups: Philippines, 2000			
Age Group	Male	Female	Both Sexes	Age	Male	Female	Age	Male	Female	Both Sexes
0-4	5,569,479	5,198,321	10,767,800	0	0.94372	0.94955	0-4	5,594,496	5,245,261	10,839,757
5 - 9	5,349,569	5,005,426	10,354,995	1	0.98660	0.98737	5 - 9	4,997,991	4,830,387	9,828,378
10 - 14	5,253,979	4,958,623	10,212,602	5	0.99514	0.99558	10 - 14	4,328,614	4,200,574	8,529,188
15 - 19	4,947,489	4,789,320	9,736,809	10	0.99473	0.99590	15 - 19	3,833,149	3,726,803	7,559,952
20 - 24	4,270,796	4,165,112	8,435,908	15	0.99187	0.99564	20 - 24	3,547,365	3,385,727	6,933,093
25 - 29	3,758,453	3,689,330	7,447,783	20	0.98855	0.99428	25 - 29	3,173,478	3,019,636	6,193,114
30 - 34	3,454,743	3,340,137	6,794,880	25	0.98517	0.99221	30 - 34	2,915,480	2,764,440	5,679,920
35 - 39	3,067,232	2,966,212	6,033,444	30	0.98107	0.99002	35 - 39	2,529,833	2,394,381	4,924,215
40 - 44	2,787,667	2,701,655	5,489,322	35	0.97461	0.98714	40 - 44	2,135,064	2,038,463	4,173,527
45 - 49	2,375,483	2,320,336	4,695,819	40	0.96345	0.98170	45 - 49	1,656,395	1,620,974	3,277,369
50 - 54	1,960,285	1,947,188	3,907,473	45	0.95297	0.97303	50 - 54	1,251,077	1,288,744	2,539,820
55 - 59	1,480,644	1,516,185	2,996,829	50	0.93801	0.96128	55 - 59	859,511	947,964	1,807,476
60 - 64	1,067,565	1,168,056	2,235,621	55	0.90971	0.94286	60 - 64	687,527	815,292	1,502,819
65 - 69	682,432	819,979	1,502,411	60	0.87278	0.91741	65 - 69	462,573	609,994	1,072,567
70 - 74	493,747	652,518	1,146,265	65	0.82283	0.87240	70+	696,481	1,131,459	1,827,940
75 - 79	287,006	422,401	709,407	70	0.75405	0.79375	Total	38,669,034	38,020,100	76,689,134
80+	237,944	429,907	667,851	75*	0.45307	0.47869				
Total	47,044,513	46,090,706	93,135,219	* average for 75, 80, 85, 90						

Table A5. Comparison of the 2000 census bases population projections (Low, Medium, High assumptions) and interpolated estimates: Philippines, 2001-2009

Projections	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
A. 2000 Census-based population Projection (Low Assumption)	76,332,470*	78,569,600	80,200,000	81,837,600	83,483,000	85,135,200	86,795,000	88,461,700	90,136,000	91,817,500	93,506,600
B. 2000 Census-based population Projection (Medium Assumption)	76,332,470*	78,568,100	80,217,200	81,877,700	83,558,700	85,261,000	86,972,500	88,706,300	90,457,200	92,226,600	94,013,200
C. 2000 Census-based population Projection (High Assumption)	76,332,470*	78,578,100	80,234,000	81,914,000	83,618,300	85,346,500	87,099,000	88,875,300	90,675,900	92,500,400	94,349,600
D. Estimates	76,332,470*	78,255,799	79,801,866	81,378,478	82,986,238	84,625,762	86,297,678	88,002,625	89,741,256	91,514,236	93,135,219*
E. Difference (A - D)		313,801	398,134	459,122	496,762	509,438	497,322	459,075	394,744	303,264	371,381
F. Difference (B - D)		312,301	415,334	499,222	572,462	635,238	674,822	703,675	715,944	712,364	877,981
G. Difference (B - D)		322,301	432,134	535,522	632,062	720,738	801,322	872,675	934,644	986,164	1,214,381
*actual official count											

Table A6. Estimated Population by five-year age group using the adjusted 2000 census as base population and the the 2000 and 2010 census annual population growth rate: 2001-2009

Scenario 1: Applying the adjusted 2000 census age structure									
PHILIPPINES	2001	2002	2003	2004	2005	2006	2007	2008	2009
0-4	11,061,200	11,279,731	11,502,580	11,729,832	11,961,573	12,197,893	12,438,882	12,684,632	12,935,236
5-9	10,029,160	10,227,302	10,429,358	10,635,406	10,845,526	11,059,796	11,278,300	11,501,121	11,728,343
10-14	8,703,429	8,875,379	9,050,726	9,229,537	9,411,881	9,597,828	9,787,448	9,980,814	10,178,001
15-19	7,714,393	7,866,803	8,022,224	8,180,716	8,342,339	8,507,155	8,675,227	8,846,620	9,021,399
20-24	7,074,727	7,214,500	7,357,034	7,502,383	7,650,605	7,801,755	7,955,891	8,113,072	8,273,358
25-29	6,319,632	6,444,486	6,571,807	6,701,643	6,834,045	6,969,062	7,106,747	7,247,152	7,390,331
30-34	5,795,954	5,910,462	6,027,232	6,146,310	6,267,740	6,391,569	6,517,844	6,646,615	6,777,929
35-39	5,024,810	5,124,083	5,225,318	5,328,552	5,433,826	5,541,180	5,650,655	5,762,292	5,876,135
40-44	4,258,787	4,342,926	4,428,727	4,516,224	4,605,449	4,696,437	4,789,222	4,883,841	4,980,329
45-49	3,344,322	3,410,394	3,477,772	3,546,481	3,616,547	3,687,998	3,760,860	3,835,162	3,910,931
50-54	2,591,706	2,642,909	2,695,124	2,748,370	2,802,669	2,858,040	2,914,505	2,972,085	3,030,804
55-59	1,844,400	1,880,839	1,917,998	1,955,891	1,994,533	2,033,938	2,074,122	2,115,099	2,156,887
60-64	1,533,520	1,563,817	1,594,713	1,626,219	1,658,347	1,691,110	1,724,521	1,758,592	1,793,335
65-69	1,094,479	1,116,102	1,138,152	1,160,638	1,183,568	1,206,952	1,230,797	1,255,113	1,279,910
70+	1,865,282	1,902,134	1,939,714	1,978,036	2,017,115	2,056,966	2,097,605	2,139,046	2,181,306
All ages	78,255,799	79,801,866	81,378,478	82,986,238	84,625,762	86,297,678	88,002,625	89,741,256	91,514,236

Scenario 2: Applying the adjusted 2010 census age structure									
PHILIPPINES	2001	2002	2003	2004	2005	2006	2007	2008	2009
0-4	9,183,321	9,364,752	9,549,767	9,738,438	9,930,836	10,127,036	10,327,111	10,531,140	10,739,199
5-9	8,831,260	9,005,735	9,183,658	9,365,096	9,550,118	9,738,796	9,931,201	10,127,407	10,327,490
10-14	8,709,820	8,881,896	9,057,372	9,236,315	9,418,793	9,604,876	9,794,636	9,988,144	10,185,476
15-19	8,304,040	8,468,099	8,635,400	8,806,006	8,979,983	9,157,396	9,338,315	9,522,808	9,710,946
20-24	7,194,566	7,336,706	7,481,654	7,629,466	7,780,198	7,933,909	8,090,655	8,250,499	8,413,501
25-29	6,351,844	6,477,334	6,605,304	6,735,802	6,868,879	7,004,584	7,142,971	7,284,092	7,428,000
30-34	5,795,015	5,909,505	6,026,256	6,145,315	6,266,725	6,390,534	6,516,789	6,645,539	6,776,832
35-39	5,145,624	5,247,284	5,350,952	5,456,669	5,564,474	5,674,409	5,786,516	5,900,838	6,017,418
40-44	4,681,570	4,774,061	4,868,381	4,964,563	5,062,646	5,162,666	5,264,663	5,368,675	5,474,741
45-49	4,004,830	4,083,952	4,164,637	4,246,916	4,330,821	4,416,383	4,503,635	4,592,612	4,683,346
50-54	3,332,489	3,398,328	3,465,467	3,533,933	3,603,751	3,674,949	3,747,554	3,821,592	3,897,094
55-59	2,555,846	2,606,341	2,657,833	2,710,343	2,763,890	2,818,495	2,874,179	2,930,963	2,988,869
60-64	1,906,650	1,944,319	1,982,732	2,021,904	2,061,850	2,102,585	2,144,125	2,186,485	2,229,683
65-69	1,281,332	1,306,646	1,332,461	1,358,786	1,385,631	1,413,006	1,440,923	1,469,390	1,498,420
70+	977,592	996,906	1,016,602	1,036,686	1,057,168	1,078,054	1,099,352	1,121,072	1,143,220
All ages	78,255,799	79,801,866	81,378,478	82,986,238	84,625,762	86,297,678	88,002,625	89,741,256	91,514,236

Scenario 3: Applying the average of the adjusted 2000 and adjusted 2010 census age structures									
PHILIPPINES	2001	2002	2003	2004	2005	2006	2007	2008	2009
0-4	10,122,260	10,322,242	10,526,174	10,734,135	10,946,205	11,162,464	11,382,996	11,607,886	11,837,218
5-9	9,430,210	9,616,519	9,806,508	10,000,251	10,197,822	10,399,296	10,604,750	10,814,264	11,027,917
10-14	8,706,624	8,878,637	9,054,049	9,232,926	9,415,337	9,601,352	9,791,042	9,984,479	10,181,738
15-19	8,009,216	8,167,451	8,328,812	8,493,361	8,661,161	8,832,276	9,006,771	9,184,714	9,366,173
20-24	7,134,647	7,275,603	7,419,344	7,565,925	7,715,402	7,867,832	8,023,273	8,181,785	8,343,429
25-29	6,335,738	6,460,910	6,588,556	6,718,723	6,851,462	6,986,823	7,124,859	7,265,622	7,409,166
30-34	5,795,484	5,909,983	6,026,744	6,145,812	6,267,232	6,391,051	6,517,317	6,646,077	6,777,380
35-39	5,085,217	5,185,684	5,288,135	5,392,611	5,499,150	5,607,794	5,718,585	5,831,565	5,946,777
40-44	4,470,178	4,558,494	4,648,554	4,740,393	4,834,047	4,929,552	5,026,943	5,126,258	5,227,535
45-49	3,674,576	3,747,173	3,821,204	3,896,698	3,973,684	4,052,190	4,132,248	4,213,887	4,297,139
50-54	2,962,097	3,020,618	3,080,295	3,141,152	3,203,210	3,266,494	3,331,029	3,396,839	3,463,949
55-59	2,200,123	2,243,590	2,287,916	2,333,117	2,379,212	2,426,217	2,474,151	2,523,031	2,572,878
60-64	1,720,085	1,754,068	1,788,722	1,824,061	1,860,098	1,896,848	1,934,323	1,972,538	2,011,509
65-69	1,187,905	1,211,374	1,235,307	1,259,712	1,284,600	1,309,979	1,335,860	1,362,252	1,389,165
70-74	1,421,437	1,449,520	1,478,158	1,507,361	1,537,141	1,567,510	1,598,479	1,630,059	1,662,263
All ages	78,255,799	79,801,866	81,378,478	82,986,238	84,625,762	86,297,678	88,002,625	89,741,256	91,514,236

Scenario 4: Getting the difference in the age structure (adjusted 2000 census and adjusted 2010 census); dividing the difference by 10 to get the yearly increment. Computing the yearly age structure by adding the yearly increment. Applying the computed yearly age structure to the computed yearly total population.

PHILIPPINES	2001	2002	2003	2004	2005	2006	2007	2008	2009
0-4	10,873,412	10,896,736	10,916,736	10,933,274	10,946,205	10,955,379	10,960,642	10,961,838	10,958,803
5-9	9,909,370	9,982,988	10,055,648	10,127,282	10,197,822	10,267,196	10,335,331	10,402,150	10,467,576
10-14	8,704,068	8,876,682	9,052,720	9,232,248	9,415,337	9,602,057	9,792,479	9,986,678	10,184,728
15-19	7,773,358	7,987,062	8,206,177	8,430,832	8,661,161	8,897,300	9,139,389	9,387,571	9,641,992
20-24	7,086,711	7,238,941	7,394,420	7,553,217	7,715,402	7,881,047	8,050,226	8,223,014	8,399,487
25-29	6,322,853	6,451,056	6,581,856	6,715,307	6,851,462	6,990,375	7,132,104	7,276,704	7,424,233
30-34	5,795,860	5,910,270	6,026,939	6,145,912	6,267,232	6,390,948	6,517,106	6,645,754	6,776,941
35-39	5,036,892	5,148,723	5,263,008	5,379,799	5,499,150	5,621,117	5,745,758	5,873,129	6,003,290
40-44	4,301,065	4,429,153	4,560,623	4,695,559	4,834,047	4,976,175	5,122,031	5,271,708	5,425,300
45-49	3,410,373	3,545,106	3,683,831	3,826,655	3,973,684	4,125,029	4,280,803	4,441,122	4,606,105
50-54	2,665,784	2,793,993	2,926,227	3,062,595	3,203,210	3,348,185	3,497,639	3,651,691	3,810,465
55-59	1,915,545	2,025,940	2,139,949	2,257,672	2,379,212	2,504,673	2,634,162	2,767,790	2,905,671
60-64	1,570,833	1,639,917	1,711,118	1,784,493	1,860,098	1,937,995	2,018,244	2,100,907	2,186,048
65-69	1,113,164	1,154,211	1,196,445	1,239,897	1,284,600	1,330,584	1,377,885	1,426,535	1,476,569
70-74	1,776,513	1,721,088	1,662,780	1,601,496	1,537,141	1,469,619	1,398,828	1,324,667	1,247,029
All ages	78,255,799	79,801,866	81,378,478	82,986,238	84,625,762	86,297,678	88,002,625	89,741,256	91,514,236

Table A7. Estimated School Age Population: Philippines, 2001-2009

Scenario 1: Apply the adjusted 2000 census age structure									
A. Beers Six Term Ordinary Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,277,006	2,321,992	2,367,867	2,414,648	2,462,353	2,511,001	2,560,609	2,611,198	2,662,787
1	2,246,559	2,290,944	2,336,205	2,382,360	2,429,427	2,477,425	2,526,370	2,576,282	2,627,181
2	2,214,444	2,258,194	2,302,808	2,348,303	2,394,698	2,442,009	2,490,255	2,539,454	2,589,625
3	2,180,125	2,223,196	2,267,119	2,311,910	2,357,585	2,404,163	2,451,661	2,500,097	2,549,491
4	2,143,066	2,185,406	2,228,582	2,272,611	2,317,510	2,363,296	2,409,987	2,457,600	2,506,154
5	2,102,670	2,144,212	2,186,574	2,229,773	2,273,826	2,318,749	2,364,560	2,411,275	2,458,914
6	2,058,402	2,099,069	2,140,540	2,182,829	2,225,955	2,269,932	2,314,778	2,360,510	2,407,146
7	2,009,911	2,049,620	2,090,113	2,131,407	2,173,516	2,216,458	2,260,247	2,304,902	2,350,439
8	1,957,155	1,995,822	2,035,253	2,075,462	2,116,466	2,158,281	2,200,921	2,244,404	2,288,745
9	1,901,021	1,938,578	1,976,878	2,015,934	2,055,762	2,096,377	2,137,794	2,180,030	2,223,100
10	1,843,380	1,879,799	1,916,937	1,954,809	1,993,429	2,032,813	2,072,974	2,113,929	2,155,693
11	1,786,971	1,822,276	1,858,277	1,894,991	1,932,429	1,970,607	2,009,540	2,049,241	2,089,727
12	1,734,904	1,769,179	1,804,132	1,839,776	1,876,123	1,913,189	1,950,987	1,989,532	2,028,838
13	1,689,236	1,722,609	1,756,642	1,791,348	1,826,738	1,862,829	1,899,632	1,937,162	1,975,434
14	1,648,938	1,681,516	1,714,737	1,748,614	1,783,161	1,818,390	1,854,315	1,890,950	1,928,309
15	1,609,715	1,641,517	1,673,948	1,707,020	1,740,745	1,775,136	1,810,206	1,845,970	1,882,440
16	1,571,292	1,602,335	1,633,992	1,666,274	1,699,194	1,732,764	1,766,997	1,801,907	1,837,507
17	1,537,696	1,568,076	1,599,056	1,630,648	1,662,864	1,695,716	1,729,218	1,763,381	1,798,219
18	1,509,761	1,539,588	1,570,005	1,601,023	1,632,654	1,664,910	1,697,803	1,731,345	1,765,551
19	1,485,929	1,515,286	1,545,223	1,575,752	1,606,883	1,638,629	1,671,003	1,704,017	1,737,682

B. Beers Six Term Modified Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,277,456	2,322,451	2,368,334	2,415,125	2,462,839	2,511,496	2,561,115	2,611,714	2,663,312
1	2,248,263	2,292,681	2,337,976	2,384,167	2,431,270	2,479,303	2,528,286	2,578,236	2,629,173
2	2,215,655	2,259,429	2,304,067	2,349,588	2,396,007	2,443,344	2,491,617	2,540,842	2,591,041
3	2,179,632	2,222,694	2,266,607	2,311,387	2,357,052	2,403,620	2,451,107	2,499,533	2,548,915
4	2,140,194	2,182,477	2,225,596	2,269,566	2,314,405	2,360,129	2,406,757	2,454,307	2,502,795
5	2,097,404	2,138,841	2,181,097	2,224,188	2,268,131	2,312,941	2,358,637	2,405,236	2,452,755
6	2,051,446	2,091,976	2,133,306	2,175,453	2,218,433	2,262,261	2,306,956	2,352,533	2,399,011
7	2,002,638	2,042,203	2,082,550	2,123,694	2,165,651	2,208,437	2,252,068	2,296,561	2,341,933
8	1,951,539	1,990,095	2,029,412	2,069,506	2,110,393	2,152,087	2,194,605	2,237,963	2,282,177
9	1,899,026	1,936,544	1,974,804	2,013,819	2,053,605	2,094,178	2,135,551	2,177,743	2,220,767
10	1,846,040	1,882,511	1,919,703	1,957,630	1,996,306	2,035,746	2,075,965	2,116,979	2,158,804
11	1,793,712	1,829,149	1,865,287	1,902,139	1,939,719	1,978,041	2,017,120	2,056,971	2,097,610
12	1,743,243	1,777,683	1,812,804	1,848,619	1,885,141	1,922,385	1,960,365	1,999,095	2,038,590
13	1,695,591	1,729,090	1,763,251	1,798,087	1,833,611	1,869,836	1,906,778	1,944,449	1,982,865
14	1,651,405	1,684,031	1,717,302	1,751,230	1,785,828	1,821,110	1,857,089	1,893,779	1,931,194
15	1,611,629	1,643,469	1,675,938	1,709,049	1,742,814	1,777,246	1,812,358	1,848,164	1,884,678
16	1,576,217	1,607,358	1,639,114	1,671,497	1,704,520	1,738,196	1,772,536	1,807,556	1,843,267
17	1,544,142	1,574,649	1,605,759	1,637,483	1,669,834	1,702,824	1,736,466	1,770,773	1,805,757
18	1,514,958	1,544,888	1,575,410	1,606,534	1,638,274	1,670,641	1,703,647	1,737,305	1,771,628
19	1,487,979	1,517,376	1,547,354	1,577,925	1,609,099	1,640,889	1,673,308	1,706,367	1,740,079

C. Sprague Fifth-Difference Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,259,525	2,304,166	2,349,688	2,396,110	2,443,449	2,491,723	2,540,951	2,591,151	2,642,344
1	2,243,779	2,288,109	2,333,314	2,379,412	2,426,421	2,474,359	2,523,244	2,573,095	2,623,930
2	2,219,633	2,263,485	2,308,204	2,353,806	2,400,309	2,447,731	2,496,090	2,545,404	2,595,692
3	2,188,093	2,231,322	2,275,406	2,320,360	2,366,202	2,412,950	2,460,622	2,509,235	2,558,809
4	2,150,170	2,192,650	2,235,969	2,280,144	2,325,192	2,371,130	2,417,975	2,465,746	2,514,461
5	2,106,871	2,148,495	2,190,942	2,234,228	2,278,369	2,323,381	2,369,283	2,416,092	2,463,826
6	2,059,205	2,099,888	2,141,375	2,183,681	2,226,823	2,270,817	2,315,681	2,361,431	2,408,085
7	2,008,181	2,047,856	2,088,315	2,129,573	2,171,646	2,214,550	2,258,302	2,302,918	2,348,416
8	1,954,808	1,993,428	2,032,812	2,072,973	2,113,928	2,155,692	2,198,281	2,241,712	2,286,000
9	1,900,094	1,937,633	1,975,914	2,014,952	2,054,760	2,095,355	2,136,752	2,178,967	2,222,016
10	1,844,059	1,880,491	1,917,644	1,955,530	1,994,164	2,033,562	2,073,738	2,114,708	2,156,488
11	1,786,724	1,822,024	1,858,020	1,894,729	1,932,162	1,970,335	2,009,262	2,048,958	2,089,439
12	1,734,039	1,768,297	1,803,233	1,838,859	1,875,188	1,912,236	1,950,015	1,988,540	2,027,827
13	1,688,989	1,722,357	1,756,385	1,791,086	1,826,471	1,862,556	1,899,354	1,936,879	1,975,145
14	1,649,618	1,682,209	1,715,443	1,749,335	1,783,895	1,819,139	1,855,079	1,891,729	1,929,103
15	1,610,240	1,642,053	1,674,494	1,707,577	1,741,312	1,775,715	1,810,797	1,846,572	1,883,054
16	1,571,101	1,602,140	1,633,793	1,666,071	1,698,987	1,732,553	1,766,783	1,801,688	1,837,283
17	1,537,028	1,567,394	1,598,361	1,629,939	1,662,141	1,694,979	1,728,466	1,762,614	1,797,438
18	1,509,570	1,539,394	1,569,807	1,600,821	1,632,447	1,664,699	1,697,588	1,731,126	1,765,327
19	1,486,455	1,515,822	1,545,769	1,576,308	1,607,451	1,639,209	1,671,594	1,704,619	1,738,296

Scenario 2: Apply the 2010 census age structures

A. Beers Six Term Ordinary Formula

Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,890,496	1,927,846	1,965,933	2,004,773	2,044,381	2,084,771	2,125,959	2,167,960	2,210,792
1	1,858,126	1,894,836	1,932,272	1,970,447	2,009,376	2,049,074	2,089,557	2,130,840	2,172,938
2	1,831,503	1,867,687	1,904,586	1,942,214	1,980,586	2,019,715	2,059,618	2,100,309	2,141,804
3	1,810,041	1,845,801	1,882,268	1,919,455	1,957,377	1,996,048	2,035,483	2,075,697	2,116,706
4	1,793,156	1,828,582	1,864,709	1,901,549	1,939,117	1,977,427	2,016,495	2,056,334	2,096,960
5	1,780,272	1,815,444	1,851,311	1,887,886	1,925,184	1,963,220	2,002,006	2,041,559	2,081,893
6	1,770,804	1,805,789	1,841,465	1,877,846	1,914,946	1,952,779	1,991,359	2,030,702	2,070,821
7	1,764,139	1,798,993	1,834,535	1,870,779	1,907,739	1,945,429	1,983,864	2,023,059	2,063,027
8	1,759,616	1,794,380	1,829,831	1,865,982	1,902,847	1,940,441	1,978,778	2,017,871	2,057,738
9	1,756,429	1,791,130	1,826,517	1,862,602	1,899,401	1,936,927	1,975,194	2,014,217	2,054,011
10	1,753,621	1,788,266	1,823,596	1,859,624	1,896,364	1,933,830	1,972,036	2,010,996	2,050,727
11	1,750,100	1,784,676	1,819,935	1,855,890	1,892,557	1,929,947	1,968,076	2,006,959	2,046,609
12	1,744,717	1,779,186	1,814,337	1,850,182	1,886,735	1,924,011	1,962,023	2,000,786	2,040,314
13	1,736,485	1,770,792	1,805,777	1,841,453	1,877,834	1,914,934	1,952,766	1,991,346	2,030,688
14	1,724,897	1,758,975	1,793,727	1,829,165	1,865,303	1,902,155	1,939,735	1,978,057	2,017,137
15	1,713,502	1,747,355	1,781,877	1,817,081	1,852,980	1,889,589	1,926,921	1,964,990	2,003,811
16	1,698,912	1,732,476	1,766,704	1,801,608	1,837,202	1,873,499	1,910,513	1,948,258	1,986,749
17	1,673,387	1,706,447	1,740,160	1,774,540	1,809,599	1,845,350	1,881,808	1,918,986	1,956,899
18	1,633,893	1,666,173	1,699,091	1,732,659	1,766,891	1,801,798	1,837,396	1,873,696	1,910,714
19	1,584,346	1,615,648	1,647,567	1,680,118	1,713,311	1,747,160	1,781,678	1,816,878	1,852,773

B. Beers Six Term Modified Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,877,654	1,914,750	1,952,579	1,991,155	2,030,494	2,070,609	2,111,517	2,153,234	2,195,774
1	1,854,648	1,891,290	1,928,655	1,966,759	2,005,615	2,045,239	2,085,646	2,126,852	2,168,871
2	1,834,153	1,870,390	1,907,343	1,945,025	1,983,452	2,022,638	2,062,599	2,103,349	2,144,904
3	1,816,169	1,852,051	1,888,641	1,925,954	1,964,004	2,002,806	2,042,375	2,082,725	2,123,872
4	1,800,696	1,836,271	1,872,550	1,909,545	1,947,271	1,985,742	2,024,974	2,064,980	2,105,777
5	1,787,723	1,823,043	1,859,060	1,895,788	1,933,243	1,971,437	2,010,386	2,050,104	2,090,607
6	1,777,182	1,812,293	1,848,097	1,884,609	1,921,843	1,959,812	1,998,531	2,038,015	2,078,279
7	1,768,813	1,803,759	1,839,395	1,875,735	1,912,793	1,950,583	1,989,120	2,028,418	2,068,493
8	1,762,363	1,797,182	1,832,688	1,868,896	1,905,818	1,943,471	1,981,867	2,021,022	2,060,951
9	1,757,322	1,792,041	1,827,445	1,863,549	1,900,367	1,937,911	1,976,198	2,015,241	2,055,055
10	1,753,084	1,787,719	1,823,038	1,859,055	1,895,784	1,933,238	1,971,432	2,010,381	2,050,099
11	1,748,806	1,783,356	1,818,589	1,854,519	1,891,157	1,928,520	1,966,621	2,005,475	2,045,096
12	1,743,426	1,777,870	1,812,995	1,848,813	1,885,340	1,922,588	1,960,571	1,999,305	2,038,805
13	1,735,752	1,770,045	1,805,015	1,840,676	1,877,041	1,914,125	1,951,942	1,990,505	2,029,831
14	1,724,641	1,758,714	1,793,460	1,828,892	1,865,025	1,901,872	1,939,446	1,977,763	2,016,837
15	1,707,817	1,741,558	1,775,965	1,811,052	1,846,832	1,883,319	1,920,527	1,958,470	1,997,163
16	1,684,345	1,717,622	1,751,557	1,786,161	1,821,450	1,857,435	1,894,132	1,931,553	1,969,714
17	1,654,624	1,687,314	1,720,650	1,754,644	1,789,309	1,824,660	1,860,709	1,897,470	1,934,958
18	1,618,996	1,650,982	1,683,599	1,716,861	1,750,781	1,785,370	1,820,643	1,856,613	1,893,293
19	1,578,496	1,609,682	1,641,483	1,673,914	1,706,984	1,740,709	1,775,099	1,810,169	1,845,932

C. Sprague Fifth-Difference Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,893,202	1,930,605	1,968,747	2,007,643	2,047,307	2,087,754	2,129,001	2,171,063	2,213,956
1	1,858,556	1,895,275	1,932,719	1,970,903	2,009,841	2,049,549	2,090,041	2,131,333	2,173,441
2	1,830,700	1,866,868	1,903,751	1,941,362	1,979,717	2,018,830	2,058,715	2,099,388	2,140,865
3	1,808,807	1,844,543	1,880,985	1,918,147	1,956,043	1,994,688	2,034,096	2,074,283	2,115,263
4	1,792,056	1,827,461	1,863,565	1,900,383	1,937,928	1,976,215	2,015,258	2,055,073	2,095,674
5	1,779,622	1,814,781	1,850,635	1,887,197	1,924,481	1,962,503	2,001,275	2,040,813	2,081,133
6	1,770,680	1,805,662	1,841,336	1,877,715	1,914,812	1,952,642	1,991,220	2,030,559	2,070,676
7	1,764,407	1,799,266	1,834,813	1,871,063	1,908,028	1,945,725	1,984,165	2,023,366	2,063,341
8	1,759,979	1,794,750	1,830,208	1,866,367	1,903,240	1,940,842	1,979,186	2,018,288	2,058,162
9	1,756,572	1,791,276	1,826,666	1,862,754	1,899,556	1,937,085	1,975,355	2,014,381	2,054,178
10	1,753,516	1,788,159	1,823,487	1,859,513	1,896,250	1,933,714	1,971,917	2,010,876	2,050,604
11	1,750,138	1,784,715	1,819,975	1,855,931	1,892,598	1,929,989	1,968,119	2,007,002	2,046,654
12	1,744,851	1,779,323	1,814,476	1,850,324	1,886,880	1,924,158	1,962,173	2,000,939	2,040,471
13	1,736,524	1,770,831	1,805,817	1,841,494	1,877,875	1,914,976	1,952,809	1,991,390	2,030,733
14	1,724,792	1,758,868	1,793,617	1,829,053	1,865,189	1,902,039	1,939,616	1,977,937	2,017,014
15	1,711,974	1,745,796	1,780,287	1,815,460	1,851,327	1,887,903	1,925,201	1,963,237	2,002,024
16	1,699,468	1,733,043	1,767,282	1,802,198	1,837,803	1,874,112	1,911,138	1,948,895	1,987,399
17	1,675,332	1,708,431	1,742,184	1,776,603	1,811,703	1,847,496	1,883,996	1,921,218	1,959,174
18	1,634,449	1,666,740	1,699,669	1,733,249	1,767,492	1,802,411	1,838,021	1,874,334	1,911,364
19	1,582,818	1,614,089	1,645,977	1,678,496	1,711,658	1,745,474	1,779,959	1,815,125	1,850,985

Scenario 3: Applying the average of the 2000 and 2010 census age structures

A. Beers Six Term Ordinary Formula

Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,083,751	2,124,919	2,166,900	2,209,711	2,253,367	2,297,886	2,343,284	2,389,579	2,436,789
1	2,052,343	2,092,890	2,134,238	2,176,403	2,219,402	2,263,250	2,307,964	2,353,561	2,400,059
2	2,022,973	2,062,940	2,103,697	2,145,259	2,187,642	2,230,862	2,274,936	2,319,881	2,365,714
3	1,995,083	2,034,499	2,074,693	2,115,682	2,157,481	2,200,105	2,243,572	2,287,897	2,333,098
4	1,968,111	2,006,994	2,046,645	2,087,080	2,128,314	2,170,362	2,213,241	2,256,967	2,301,557
5	1,941,471	1,979,828	2,018,942	2,058,830	2,099,505	2,140,984	2,183,283	2,226,417	2,270,403
6	1,914,603	1,952,429	1,991,002	2,030,338	2,070,450	2,111,355	2,153,069	2,195,606	2,238,984
7	1,887,025	1,924,306	1,962,324	2,001,093	2,040,628	2,080,943	2,122,056	2,163,980	2,206,733
8	1,858,386	1,895,101	1,932,542	1,970,722	2,009,657	2,049,361	2,089,849	2,131,137	2,173,241
9	1,828,725	1,864,854	1,901,697	1,939,268	1,977,582	2,016,652	2,056,494	2,097,123	2,138,555
10	1,798,500	1,834,032	1,870,267	1,907,217	1,944,897	1,983,321	2,022,505	2,062,463	2,103,210
11	1,768,535	1,803,476	1,839,106	1,875,441	1,912,493	1,950,277	1,988,808	2,028,100	2,068,168
12	1,739,810	1,774,183	1,809,235	1,844,979	1,881,429	1,918,600	1,956,505	1,995,159	2,034,576
13	1,712,861	1,746,701	1,781,210	1,816,400	1,852,286	1,888,881	1,926,199	1,964,254	2,003,061
14	1,686,918	1,720,246	1,754,232	1,788,889	1,824,232	1,860,272	1,897,025	1,934,504	1,972,723
15	1,661,609	1,694,436	1,727,913	1,762,050	1,796,862	1,832,362	1,868,563	1,905,480	1,943,126
16	1,635,102	1,667,406	1,700,348	1,733,941	1,768,198	1,803,131	1,838,755	1,875,083	1,912,128
17	1,605,541	1,637,261	1,669,608	1,702,594	1,736,231	1,770,533	1,805,513	1,841,184	1,877,559
18	1,571,827	1,602,881	1,634,548	1,666,841	1,699,772	1,733,354	1,767,599	1,802,521	1,838,132
19	1,535,138	1,565,467	1,596,395	1,627,935	1,660,097	1,692,895	1,726,341	1,760,447	1,795,228

B. Beers Six Term Modified Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,077,555	2,118,600	2,160,457	2,203,140	2,246,666	2,291,053	2,336,316	2,382,474	2,429,543
1	2,051,456	2,091,985	2,133,316	2,175,463	2,218,443	2,262,271	2,306,966	2,352,544	2,399,022
2	2,024,904	2,064,909	2,105,705	2,147,306	2,189,730	2,232,991	2,277,108	2,322,096	2,367,972
3	1,997,901	2,037,372	2,077,624	2,118,671	2,160,528	2,203,213	2,246,741	2,291,129	2,336,394
4	1,970,445	2,009,374	2,049,073	2,089,555	2,130,838	2,172,936	2,215,866	2,259,644	2,304,286
5	1,942,564	1,980,942	2,020,079	2,059,988	2,100,687	2,142,189	2,184,511	2,227,670	2,271,681
6	1,914,314	1,952,134	1,990,702	2,030,031	2,070,138	2,111,037	2,152,743	2,195,274	2,238,645
7	1,885,725	1,922,981	1,960,972	1,999,714	2,039,222	2,079,510	2,120,594	2,162,490	2,205,213
8	1,856,951	1,893,638	1,931,050	1,969,201	2,008,106	2,047,779	2,088,236	2,129,492	2,171,564
9	1,828,174	1,864,293	1,901,125	1,938,684	1,976,986	2,016,045	2,055,875	2,096,492	2,137,911
10	1,799,562	1,835,115	1,871,371	1,908,342	1,946,045	1,984,492	2,023,699	2,063,680	2,104,451
11	1,771,259	1,806,253	1,841,938	1,878,329	1,915,438	1,953,281	1,991,871	2,031,223	2,071,353
12	1,743,334	1,777,777	1,812,899	1,848,716	1,885,240	1,922,486	1,960,468	1,999,200	2,038,698
13	1,715,672	1,749,567	1,784,133	1,819,381	1,855,326	1,891,981	1,929,360	1,967,477	2,006,348
14	1,688,023	1,721,373	1,755,381	1,790,061	1,825,427	1,861,491	1,898,268	1,935,771	1,974,015
15	1,659,723	1,692,513	1,725,952	1,760,051	1,794,823	1,830,283	1,866,443	1,903,317	1,940,920
16	1,630,281	1,662,490	1,695,335	1,728,829	1,762,985	1,797,815	1,833,334	1,869,555	1,906,491
17	1,599,383	1,630,982	1,663,204	1,696,063	1,729,572	1,763,742	1,798,588	1,834,122	1,870,358
18	1,566,977	1,597,935	1,629,504	1,661,698	1,694,527	1,728,005	1,762,145	1,796,959	1,832,461
19	1,533,237	1,563,529	1,594,419	1,625,919	1,658,042	1,690,799	1,724,203	1,758,268	1,793,005

C. Sprague Fifth-Difference Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,076,363	2,117,385	2,159,217	2,201,876	2,245,378	2,289,739	2,334,976	2,381,107	2,428,150
1	2,051,168	2,091,692	2,133,017	2,175,158	2,218,131	2,261,954	2,306,643	2,352,214	2,398,686
2	2,025,166	2,065,176	2,105,977	2,147,584	2,190,013	2,233,280	2,277,402	2,322,396	2,368,278
3	1,998,450	2,037,933	2,078,195	2,119,253	2,161,123	2,203,819	2,247,359	2,291,759	2,337,036
4	1,971,113	2,010,055	2,049,767	2,090,264	2,131,560	2,173,672	2,216,617	2,260,409	2,305,067
5	1,943,246	1,981,638	2,020,788	2,060,712	2,101,425	2,142,942	2,185,279	2,228,453	2,272,479
6	1,914,943	1,952,775	1,991,355	2,030,698	2,070,817	2,111,730	2,153,450	2,195,995	2,239,380
7	1,886,294	1,923,561	1,961,564	2,000,318	2,039,837	2,080,137	2,121,234	2,163,142	2,205,878
8	1,857,394	1,894,089	1,931,510	1,969,670	2,008,584	2,048,267	2,088,734	2,130,000	2,172,081
9	1,828,333	1,864,455	1,901,290	1,938,853	1,977,158	2,016,220	2,056,054	2,096,674	2,138,097
10	1,798,787	1,834,325	1,870,565	1,907,521	1,945,207	1,983,638	2,022,828	2,062,792	2,103,546
11	1,768,431	1,803,369	1,838,998	1,875,330	1,912,380	1,950,162	1,988,691	2,027,980	2,068,046
12	1,739,445	1,773,810	1,808,855	1,844,591	1,881,034	1,918,197	1,956,094	1,994,740	2,034,149
13	1,712,756	1,746,594	1,781,101	1,816,290	1,852,173	1,888,766	1,926,082	1,964,134	2,002,939
14	1,687,205	1,720,538	1,754,530	1,789,194	1,824,542	1,860,589	1,897,348	1,934,833	1,973,059
15	1,661,107	1,693,925	1,727,391	1,761,518	1,796,320	1,831,809	1,867,999	1,904,904	1,942,539
16	1,635,284	1,667,592	1,700,538	1,734,135	1,768,395	1,803,333	1,838,960	1,875,292	1,912,341
17	1,606,180	1,637,913	1,670,272	1,703,271	1,736,922	1,771,238	1,806,231	1,841,916	1,878,306
18	1,572,009	1,603,067	1,634,738	1,667,035	1,699,970	1,733,555	1,767,804	1,802,730	1,838,346
19	1,534,636	1,564,955	1,595,873	1,627,402	1,659,554	1,692,341	1,725,776	1,759,872	1,794,641

Scenario 4: Get the difference in the age structure (adjusted 2000 census and official 2010 census); divide the difference by 10 to get the yearly increment. Compute the yearly age structure by adding the yearly increment. Apply the computed yearly age structure to the computed yearly total population.

A. Beers Six Term Ordinary Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,238,355	2,243,163	2,247,287	2,250,698	2,253,367	2,255,263	2,256,354	2,256,608	2,255,991
1	2,207,716	2,211,722	2,215,025	2,217,595	2,219,402	2,220,414	2,220,601	2,219,928	2,218,362
2	2,176,150	2,180,092	2,183,341	2,185,868	2,187,642	2,188,633	2,188,809	2,188,138	2,186,586
3	2,143,116	2,147,717	2,151,664	2,154,928	2,157,481	2,159,294	2,160,336	2,160,577	2,159,984
4	2,108,075	2,114,041	2,119,420	2,124,186	2,128,314	2,131,775	2,134,542	2,136,587	2,137,879
5	2,070,431	2,078,458	2,085,995	2,093,019	2,099,505	2,105,431	2,110,772	2,115,502	2,119,595
6	2,029,642	2,040,413	2,050,817	2,060,836	2,070,450	2,079,640	2,088,385	2,096,663	2,104,454
7	1,985,334	1,999,495	2,013,440	2,027,156	2,040,628	2,053,841	2,066,779	2,079,427	2,091,769
8	1,937,402	1,955,534	1,973,626	1,991,670	2,009,657	2,027,577	2,045,421	2,063,178	2,080,838
9	1,886,561	1,909,089	1,931,769	1,954,601	1,977,582	2,000,707	2,023,974	2,047,379	2,070,920
10	1,834,404	1,861,492	1,888,935	1,916,735	1,944,897	1,973,423	2,002,317	2,031,583	2,061,223
11	1,783,284	1,814,756	1,846,775	1,879,351	1,912,493	1,946,211	1,980,515	2,015,415	2,050,921
12	1,735,885	1,771,181	1,807,194	1,843,938	1,881,429	1,919,682	1,958,712	1,998,535	2,039,167
13	1,693,961	1,732,246	1,771,383	1,811,390	1,852,286	1,894,092	1,936,826	1,980,509	2,025,163
14	1,656,534	1,697,008	1,738,434	1,780,834	1,824,232	1,868,649	1,914,109	1,960,636	2,008,254
15	1,620,094	1,662,685	1,706,327	1,751,044	1,796,862	1,843,807	1,891,906	1,941,186	1,991,674
16	1,584,054	1,628,363	1,673,805	1,720,408	1,768,198	1,817,205	1,867,458	1,918,988	1,971,825
17	1,551,265	1,595,750	1,641,387	1,688,205	1,736,231	1,785,497	1,836,031	1,887,865	1,941,031
18	1,522,174	1,564,905	1,608,731	1,653,678	1,699,772	1,747,043	1,795,518	1,845,226	1,896,198
19	1,495,771	1,535,359	1,575,926	1,617,498	1,660,097	1,703,748	1,748,476	1,794,306	1,841,264

B. Beers Six Term Modified Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,237,476	2,240,911	2,243,608	2,245,537	2,246,666	2,246,964	2,246,397	2,244,930	2,242,528
1	2,208,901	2,212,403	2,215,180	2,217,204	2,218,443	2,218,865	2,218,438	2,217,129	2,214,901
2	2,177,505	2,181,621	2,185,050	2,187,763	2,189,730	2,190,921	2,191,304	2,190,847	2,189,517
3	2,143,286	2,148,565	2,153,217	2,157,214	2,160,528	2,163,132	2,164,994	2,166,086	2,166,377
4	2,106,245	2,113,236	2,119,682	2,125,557	2,130,838	2,135,497	2,139,509	2,142,846	2,145,479
5	2,066,436	2,075,681	2,084,486	2,092,828	2,100,687	2,108,039	2,114,861	2,121,130	2,126,822
6	2,024,020	2,036,039	2,047,744	2,059,116	2,070,138	2,080,792	2,091,058	2,100,919	2,110,353
7	1,979,255	1,994,514	2,009,603	2,024,510	2,039,222	2,053,725	2,068,004	2,082,047	2,095,837
8	1,932,621	1,951,512	1,970,395	1,989,262	2,008,106	2,026,917	2,045,689	2,064,410	2,083,073
9	1,884,856	1,907,644	1,930,596	1,953,711	1,976,986	2,000,418	2,024,004	2,047,741	2,071,626
10	1,836,744	1,863,553	1,890,704	1,918,200	1,946,045	1,974,241	2,002,792	2,031,700	2,060,969
11	1,789,221	1,819,991	1,851,278	1,883,091	1,915,438	1,948,328	1,981,771	2,015,774	2,050,348
12	1,743,261	1,777,721	1,812,861	1,848,697	1,885,240	1,922,507	1,960,509	1,999,263	2,038,783
13	1,699,607	1,737,281	1,775,780	1,815,122	1,855,326	1,896,410	1,938,393	1,981,294	2,025,134
14	1,658,729	1,698,968	1,740,149	1,782,295	1,825,427	1,869,567	1,914,739	1,960,966	2,008,272
15	1,621,248	1,663,087	1,705,946	1,749,850	1,794,823	1,840,890	1,888,077	1,936,409	1,985,915
16	1,587,030	1,629,411	1,672,847	1,717,363	1,762,985	1,809,739	1,857,653	1,906,754	1,957,070
17	1,555,190	1,597,182	1,640,226	1,684,347	1,729,572	1,775,926	1,823,436	1,872,131	1,922,038
18	1,525,361	1,566,107	1,607,866	1,650,665	1,694,527	1,739,478	1,785,544	1,832,751	1,881,127
19	1,497,031	1,535,837	1,575,593	1,616,320	1,658,042	1,700,781	1,744,562	1,789,408	1,835,346

C. Sprague Fifth-Difference Formula									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,222,893	2,229,453	2,235,406	2,240,723	2,245,378	2,249,342	2,252,586	2,255,081	2,256,795
1	2,205,257	2,209,542	2,213,136	2,216,009	2,218,131	2,219,473	2,220,002	2,219,685	2,218,490
2	2,180,739	2,184,162	2,186,868	2,188,828	2,190,013	2,190,390	2,189,927	2,188,591	2,186,347
3	2,150,165	2,153,967	2,157,080	2,159,475	2,161,123	2,161,993	2,162,054	2,161,273	2,159,618
4	2,114,358	2,119,612	2,124,248	2,128,240	2,131,560	2,134,181	2,136,073	2,137,207	2,137,553
5	2,074,146	2,081,752	2,088,850	2,095,415	2,101,425	2,106,854	2,111,677	2,115,869	2,119,402
6	2,030,353	2,041,043	2,051,363	2,061,294	2,070,817	2,079,912	2,088,558	2,096,734	2,104,417
7	1,983,804	1,998,138	2,012,264	2,026,169	2,039,837	2,053,255	2,066,406	2,079,276	2,091,848
8	1,935,325	1,953,693	1,972,031	1,990,331	2,008,584	2,026,782	2,044,915	2,062,973	2,080,946
9	1,885,742	1,908,362	1,931,140	1,954,073	1,977,158	2,000,393	2,023,774	2,047,298	2,070,962
10	1,835,005	1,862,025	1,889,397	1,917,123	1,945,207	1,973,653	2,002,464	2,031,642	2,061,192
11	1,783,065	1,814,562	1,846,607	1,879,210	1,912,380	1,946,127	1,980,462	2,015,394	2,050,932
12	1,735,120	1,770,503	1,806,606	1,843,445	1,881,034	1,919,389	1,958,526	1,998,459	2,039,206
13	1,693,742	1,732,052	1,771,215	1,811,249	1,852,173	1,894,008	1,936,773	1,980,488	2,025,174
14	1,657,135	1,697,540	1,738,895	1,781,222	1,824,542	1,868,879	1,914,255	1,960,695	2,008,223
15	1,620,414	1,662,802	1,706,232	1,750,730	1,796,320	1,843,028	1,890,880	1,939,904	1,990,127
16	1,583,937	1,628,321	1,673,840	1,720,522	1,768,395	1,817,488	1,867,831	1,919,454	1,972,387
17	1,550,858	1,595,602	1,641,508	1,688,605	1,736,922	1,786,489	1,837,337	1,889,497	1,943,001
18	1,522,058	1,564,863	1,608,765	1,653,792	1,699,970	1,747,326	1,795,891	1,845,692	1,896,761
19	1,496,091	1,535,475	1,575,832	1,617,184	1,659,554	1,702,968	1,747,449	1,793,024	1,839,716

Table A8. Estimated School Age Population using the adjusted 2000 census as base population and the 2000 and 2010 census annual population growth rate: Philippines, 2001-2009

Scenario 1: Applying the 2000 census age structure									
A. Beers Six Term Ordinary Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,299,499	2,322,288	2,368,169	2,414,956	2,462,667	2,511,321	2,560,936	2,611,531	2,636,992
1	2,268,751	2,291,236	2,336,503	2,382,664	2,429,737	2,477,741	2,526,692	2,576,611	2,601,732
2	2,236,319	2,258,482	2,303,102	2,348,603	2,395,003	2,442,321	2,490,572	2,539,778	2,564,539
3	2,201,661	2,223,480	2,267,408	2,312,205	2,357,886	2,404,470	2,451,974	2,500,416	2,524,794
4	2,164,236	2,185,684	2,228,866	2,272,901	2,317,806	2,363,598	2,410,294	2,457,913	2,481,877
5	2,123,441	2,144,486	2,186,853	2,230,058	2,274,116	2,319,045	2,364,861	2,411,583	2,435,095
6	2,078,736	2,099,337	2,140,813	2,183,108	2,226,239	2,270,221	2,315,073	2,360,811	2,383,828
7	2,029,766	2,049,882	2,090,380	2,131,679	2,173,794	2,216,740	2,260,536	2,305,196	2,327,670
8	1,976,489	1,996,077	2,035,512	2,075,727	2,116,737	2,158,556	2,201,202	2,244,690	2,266,574
9	1,919,799	1,938,826	1,977,130	2,016,191	2,056,024	2,096,644	2,138,067	2,180,308	2,201,565
10	1,861,589	1,880,038	1,917,182	1,955,058	1,993,684	2,033,072	2,073,239	2,114,199	2,134,811
11	1,804,623	1,822,508	1,858,515	1,895,232	1,932,676	1,970,859	2,009,796	2,049,503	2,069,484
12	1,752,041	1,769,405	1,804,362	1,840,010	1,876,363	1,913,433	1,951,236	1,989,786	2,009,185
13	1,705,923	1,722,829	1,756,866	1,791,576	1,826,972	1,863,066	1,899,874	1,937,409	1,956,298
14	1,665,227	1,681,730	1,714,955	1,748,837	1,783,388	1,818,622	1,854,552	1,891,191	1,909,629
15	1,625,616	1,641,727	1,674,162	1,707,237	1,740,967	1,775,362	1,810,437	1,846,205	1,864,205
16	1,586,813	1,602,539	1,634,200	1,666,486	1,699,410	1,732,985	1,767,223	1,802,137	1,819,707
17	1,552,886	1,568,276	1,599,260	1,630,856	1,663,076	1,695,932	1,729,438	1,763,606	1,780,800
18	1,524,675	1,539,785	1,570,206	1,601,228	1,632,862	1,665,122	1,698,019	1,731,566	1,748,448
19	1,500,608	1,515,480	1,545,420	1,575,953	1,607,088	1,638,839	1,671,216	1,704,234	1,720,849

B. Beers Six Term Modified Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,299,953	2,322,747	2,368,637	2,415,433	2,463,153	2,511,817	2,561,442	2,612,047	2,637,513
1	2,270,472	2,292,973	2,338,275	2,384,471	2,431,580	2,479,620	2,528,608	2,578,565	2,603,705
2	2,237,542	2,259,717	2,304,361	2,349,887	2,396,313	2,443,656	2,491,934	2,541,167	2,565,942
3	2,201,163	2,222,978	2,266,896	2,311,682	2,357,353	2,403,926	2,451,420	2,499,851	2,524,224
4	2,161,336	2,182,756	2,225,880	2,269,855	2,314,700	2,360,430	2,407,064	2,454,620	2,478,551
5	2,118,122	2,139,114	2,181,376	2,224,472	2,268,420	2,313,236	2,358,938	2,405,542	2,428,995
6	2,071,711	2,092,243	2,133,578	2,175,731	2,218,716	2,262,550	2,307,250	2,352,833	2,375,772
7	2,022,420	2,042,464	2,082,816	2,123,965	2,165,927	2,208,719	2,252,355	2,296,854	2,319,247
8	1,970,817	1,990,349	2,029,671	2,069,771	2,110,662	2,152,362	2,194,885	2,238,248	2,260,070
9	1,917,785	1,936,791	1,975,056	2,014,076	2,053,867	2,094,445	2,135,824	2,178,020	2,199,255
10	1,864,275	1,882,751	1,919,948	1,957,880	1,996,561	2,036,006	2,076,230	2,117,250	2,137,892
11	1,811,431	1,829,383	1,865,525	1,902,381	1,939,966	1,978,293	2,017,377	2,057,234	2,077,291
12	1,760,463	1,777,910	1,813,035	1,848,855	1,885,382	1,922,631	1,960,615	1,999,350	2,018,843
13	1,712,340	1,729,310	1,763,476	1,798,316	1,833,845	1,870,075	1,907,021	1,944,698	1,963,657
14	1,667,718	1,684,246	1,717,521	1,751,454	1,786,056	1,821,343	1,857,326	1,894,021	1,912,486
15	1,627,549	1,643,679	1,676,152	1,709,267	1,743,036	1,777,473	1,812,590	1,848,400	1,866,421
16	1,591,788	1,607,563	1,639,323	1,671,710	1,704,738	1,738,417	1,772,763	1,807,786	1,825,411
17	1,559,396	1,574,850	1,605,964	1,637,692	1,670,047	1,703,042	1,736,688	1,770,999	1,788,265
18	1,529,923	1,545,085	1,575,611	1,606,739	1,638,483	1,670,854	1,703,864	1,737,527	1,754,467
19	1,502,677	1,517,570	1,547,552	1,578,126	1,609,304	1,641,099	1,673,521	1,706,584	1,723,223

C. Sprague Fifth-Difference Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,281,845	2,304,460	2,349,988	2,396,416	2,443,760	2,492,041	2,541,275	2,591,482	2,616,747
1	2,265,944	2,288,401	2,333,612	2,379,716	2,426,731	2,474,675	2,523,566	2,573,423	2,598,513
2	2,241,559	2,263,774	2,308,498	2,354,106	2,400,615	2,448,043	2,496,408	2,545,729	2,570,548
3	2,209,708	2,231,607	2,275,696	2,320,656	2,366,504	2,413,258	2,460,936	2,509,556	2,534,022
4	2,171,410	2,192,929	2,236,254	2,280,435	2,325,489	2,371,432	2,418,284	2,466,061	2,490,103
5	2,127,683	2,148,770	2,191,222	2,234,513	2,278,659	2,323,678	2,369,586	2,416,401	2,439,959
6	2,079,547	2,100,156	2,141,648	2,183,960	2,227,107	2,271,107	2,315,976	2,361,732	2,384,758
7	2,028,019	2,048,118	2,088,581	2,129,845	2,171,923	2,214,833	2,258,590	2,303,212	2,325,667
8	1,974,118	1,993,683	2,033,071	2,073,238	2,114,198	2,155,967	2,198,562	2,241,998	2,263,856
9	1,918,864	1,937,881	1,976,166	2,015,209	2,055,022	2,095,623	2,137,025	2,179,245	2,200,492
10	1,862,275	1,880,731	1,917,888	1,955,779	1,994,419	2,033,822	2,074,003	2,114,978	2,135,598
11	1,804,374	1,822,256	1,858,258	1,894,970	1,932,409	1,970,586	2,009,518	2,049,220	2,069,198
12	1,751,168	1,768,523	1,803,463	1,839,093	1,875,427	1,912,480	1,950,264	1,988,794	2,008,184
13	1,705,673	1,722,577	1,756,609	1,791,314	1,826,704	1,862,794	1,899,596	1,937,126	1,956,012
14	1,665,913	1,682,423	1,715,662	1,749,558	1,784,123	1,819,371	1,855,316	1,891,970	1,910,416
15	1,626,147	1,642,262	1,674,708	1,707,794	1,741,535	1,775,941	1,811,028	1,846,808	1,864,813
16	1,586,620	1,602,345	1,634,002	1,666,284	1,699,204	1,732,774	1,767,008	1,801,918	1,819,486
17	1,552,211	1,567,594	1,598,564	1,630,147	1,662,353	1,695,195	1,728,686	1,762,839	1,780,026
18	1,524,482	1,539,590	1,570,007	1,601,025	1,632,656	1,664,911	1,697,804	1,731,347	1,748,227
19	1,501,138	1,516,015	1,545,967	1,576,510	1,607,656	1,639,418	1,671,807	1,704,836	1,721,458

Scenario 2: Applying the 2010 census age structure

A. Beers Six Term Ordinary Formula (with a 3-year moving average)

Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,909,171	1,928,092	1,966,184	2,005,029	2,044,642	2,085,037	2,126,230	2,168,237	2,189,376
1	1,876,481	1,895,078	1,932,518	1,970,698	2,009,632	2,049,336	2,089,824	2,131,112	2,151,889
2	1,849,595	1,867,925	1,904,829	1,942,462	1,980,838	2,019,973	2,059,881	2,100,577	2,121,056
3	1,827,921	1,846,037	1,882,508	1,919,700	1,957,626	1,996,302	2,035,743	2,075,962	2,096,201
4	1,810,869	1,828,816	1,864,947	1,901,792	1,939,365	1,977,680	2,016,752	2,056,596	2,076,647
5	1,797,858	1,815,675	1,851,547	1,888,127	1,925,430	1,963,470	2,002,261	2,041,819	2,061,726
6	1,788,297	1,806,020	1,841,700	1,878,086	1,915,191	1,953,028	1,991,613	2,030,961	2,050,762
7	1,781,566	1,799,222	1,834,769	1,871,017	1,907,982	1,945,678	1,984,117	2,023,317	2,043,043
8	1,776,998	1,794,609	1,830,064	1,866,220	1,903,090	1,940,689	1,979,030	2,018,129	2,037,805
9	1,773,779	1,791,359	1,826,750	1,862,840	1,899,643	1,937,174	1,975,446	2,014,474	2,034,114
10	1,770,944	1,788,495	1,823,829	1,859,862	1,896,606	1,934,077	1,972,287	2,011,253	2,030,862
11	1,767,388	1,784,903	1,820,167	1,856,127	1,892,798	1,930,193	1,968,327	2,007,215	2,026,784
12	1,761,952	1,779,413	1,814,569	1,850,418	1,886,976	1,924,256	1,962,273	2,001,041	2,020,550
13	1,753,639	1,771,018	1,806,008	1,841,688	1,878,074	1,915,178	1,953,015	1,991,600	2,011,017
14	1,741,936	1,759,200	1,793,956	1,829,398	1,865,541	1,902,397	1,939,982	1,978,310	1,997,597
15	1,730,429	1,747,578	1,782,104	1,817,313	1,853,217	1,889,830	1,927,166	1,965,241	1,984,401
16	1,715,694	1,732,698	1,766,930	1,801,838	1,837,436	1,873,738	1,910,756	1,948,506	1,967,503
17	1,689,917	1,706,665	1,740,382	1,774,766	1,809,830	1,845,586	1,882,048	1,919,231	1,937,943
18	1,650,033	1,666,386	1,699,308	1,732,880	1,767,116	1,802,028	1,837,630	1,873,935	1,892,205
19	1,599,997	1,615,854	1,647,777	1,680,332	1,713,530	1,747,383	1,781,905	1,817,110	1,834,826

B. Beers Six Term Modified Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,896,202	1,914,994	1,952,828	1,991,409	2,030,753	2,070,873	2,111,787	2,153,509	2,174,504
1	1,872,969	1,891,531	1,928,901	1,967,010	2,005,871	2,045,500	2,085,913	2,127,123	2,147,861
2	1,852,272	1,870,629	1,907,586	1,945,273	1,983,705	2,022,896	2,062,862	2,103,617	2,124,126
3	1,834,110	1,852,287	1,888,882	1,926,199	1,964,255	2,003,062	2,042,635	2,082,991	2,103,299
4	1,818,484	1,836,506	1,872,789	1,909,789	1,947,519	1,985,996	2,025,232	2,065,244	2,085,379
5	1,805,383	1,823,275	1,859,297	1,896,030	1,933,489	1,971,689	2,010,642	2,050,366	2,070,356
6	1,794,737	1,812,524	1,848,333	1,884,850	1,922,088	1,960,062	1,998,786	2,038,275	2,058,147
7	1,786,286	1,803,989	1,839,629	1,875,974	1,913,037	1,950,832	1,989,374	2,028,677	2,048,456
8	1,779,773	1,797,411	1,832,922	1,869,134	1,906,062	1,943,719	1,982,120	2,021,280	2,040,986
9	1,774,681	1,792,269	1,827,678	1,863,787	1,900,609	1,938,159	1,976,450	2,015,498	2,035,148
10	1,770,401	1,787,947	1,823,271	1,859,292	1,896,025	1,933,484	1,971,683	2,010,637	2,030,240
11	1,766,081	1,783,584	1,818,821	1,854,755	1,891,399	1,928,766	1,966,872	2,005,731	2,025,286
12	1,760,648	1,778,097	1,813,226	1,849,049	1,885,580	1,922,833	1,960,821	1,999,561	2,019,055
13	1,752,899	1,770,271	1,805,245	1,840,911	1,877,281	1,914,369	1,952,191	1,990,759	2,010,168
14	1,741,677	1,758,938	1,793,689	1,829,126	1,865,263	1,902,114	1,939,694	1,978,015	1,997,300
15	1,724,688	1,741,780	1,776,192	1,811,283	1,847,068	1,883,560	1,920,772	1,958,720	1,977,817
16	1,700,984	1,717,841	1,751,780	1,786,389	1,821,682	1,857,672	1,894,374	1,931,800	1,950,634
17	1,670,969	1,687,529	1,720,869	1,754,868	1,789,538	1,824,893	1,860,946	1,897,712	1,916,214
18	1,634,989	1,651,192	1,683,814	1,717,080	1,751,004	1,785,598	1,820,875	1,856,850	1,874,953
19	1,594,089	1,609,887	1,641,693	1,674,127	1,707,202	1,740,931	1,775,325	1,810,400	1,828,050

C. Sprague Fifth-Difference Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	1,911,903	1,930,851	1,968,998	2,007,899	2,047,568	2,088,021	2,129,273	2,171,340	2,192,510
1	1,876,916	1,895,517	1,932,966	1,971,154	2,010,098	2,049,810	2,090,308	2,131,605	2,152,387
2	1,848,784	1,867,106	1,903,994	1,941,610	1,979,970	2,019,087	2,058,977	2,099,656	2,120,126
3	1,826,675	1,844,779	1,881,225	1,918,392	1,956,293	1,994,942	2,034,355	2,074,547	2,094,773
4	1,809,759	1,827,694	1,863,803	1,900,626	1,938,175	1,976,467	2,015,515	2,055,335	2,075,373
5	1,797,201	1,815,012	1,850,871	1,887,438	1,924,727	1,962,753	2,001,530	2,041,074	2,060,973
6	1,788,171	1,805,893	1,841,571	1,877,954	1,915,056	1,952,891	1,991,474	2,030,818	2,050,618
7	1,781,836	1,799,495	1,835,047	1,871,301	1,908,272	1,945,973	1,984,419	2,023,624	2,043,353
8	1,777,365	1,794,979	1,830,442	1,866,605	1,903,483	1,941,089	1,979,439	2,018,546	2,038,225
9	1,773,924	1,791,505	1,826,899	1,862,992	1,899,798	1,937,332	1,975,607	2,014,638	2,034,280
10	1,770,837	1,788,387	1,823,720	1,859,750	1,896,492	1,933,961	1,972,169	2,011,132	2,030,740
11	1,767,426	1,784,942	1,820,207	1,856,168	1,892,839	1,930,235	1,968,370	2,007,259	2,026,828
12	1,762,087	1,779,550	1,814,708	1,850,560	1,887,121	1,924,404	1,962,424	2,001,194	2,020,705
13	1,753,678	1,771,057	1,806,047	1,841,729	1,878,115	1,915,220	1,953,058	1,991,644	2,011,062
14	1,741,830	1,759,093	1,793,846	1,829,286	1,865,427	1,902,281	1,939,864	1,978,189	1,997,475
15	1,728,885	1,746,019	1,780,514	1,815,691	1,851,563	1,888,144	1,925,447	1,963,487	1,982,630
16	1,716,256	1,733,264	1,767,508	1,802,428	1,838,038	1,874,351	1,911,382	1,949,144	1,968,147
17	1,691,882	1,708,649	1,742,406	1,776,830	1,811,934	1,847,732	1,884,237	1,921,463	1,940,196
18	1,650,594	1,666,953	1,699,886	1,733,470	1,767,717	1,802,641	1,838,255	1,874,573	1,892,849
19	1,598,453	1,614,295	1,646,187	1,678,711	1,711,876	1,745,697	1,780,186	1,815,356	1,833,055

Scenario 3: Applying the average of the 2000 and 2010 census age structures

A. Beers Six Term Ordinary Formula (with a 3-year moving average)

Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,104,335	2,125,190	2,167,176	2,209,992	2,253,654	2,298,179	2,343,583	2,389,884	2,413,184
1	2,072,616	2,093,157	2,134,510	2,176,681	2,219,685	2,263,538	2,308,258	2,353,861	2,376,810
2	2,042,957	2,063,203	2,103,965	2,145,532	2,187,921	2,231,147	2,275,226	2,320,177	2,342,798
3	2,014,791	2,034,758	2,074,958	2,115,952	2,157,756	2,200,386	2,243,858	2,288,189	2,310,498
4	1,987,552	2,007,250	2,046,906	2,087,346	2,128,585	2,170,639	2,213,523	2,257,255	2,279,262
5	1,960,649	1,980,080	2,019,200	2,059,093	2,099,773	2,141,258	2,183,561	2,226,701	2,248,410
6	1,933,516	1,952,678	1,991,257	2,030,597	2,070,715	2,111,625	2,153,343	2,195,886	2,217,295
7	1,905,666	1,924,552	1,962,574	2,001,348	2,040,888	2,081,209	2,122,327	2,164,256	2,185,357
8	1,876,743	1,895,343	1,932,788	1,970,974	2,009,913	2,049,622	2,090,116	2,131,409	2,152,189
9	1,846,789	1,865,092	1,901,940	1,939,516	1,977,834	2,016,909	2,056,756	2,097,391	2,117,839
10	1,816,266	1,834,266	1,870,505	1,907,460	1,945,145	1,983,574	2,022,763	2,062,726	2,082,836
11	1,786,006	1,803,706	1,839,341	1,875,680	1,912,737	1,950,526	1,989,062	2,028,359	2,048,134
12	1,756,997	1,774,409	1,809,465	1,845,214	1,881,669	1,918,845	1,956,755	1,995,413	2,014,868
13	1,729,781	1,746,924	1,781,437	1,816,632	1,852,523	1,889,122	1,926,445	1,964,505	1,983,657
14	1,703,582	1,720,465	1,754,456	1,789,118	1,824,464	1,860,510	1,897,267	1,934,750	1,953,613
15	1,678,022	1,694,653	1,728,133	1,762,275	1,797,092	1,832,596	1,868,802	1,905,723	1,924,303
16	1,651,254	1,667,618	1,700,565	1,734,162	1,768,423	1,803,361	1,838,990	1,875,322	1,893,605
17	1,621,401	1,637,470	1,669,821	1,702,811	1,736,453	1,770,759	1,805,743	1,841,419	1,859,371
18	1,587,354	1,603,085	1,634,757	1,667,054	1,699,989	1,733,575	1,767,825	1,802,751	1,820,327
19	1,550,302	1,565,667	1,596,599	1,628,142	1,660,309	1,693,111	1,726,561	1,760,672	1,777,837

B. Beers Six Term Modified Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,098,078	2,118,871	2,160,732	2,203,421	2,246,953	2,291,345	2,336,614	2,382,778	2,406,009
1	2,071,720	2,092,252	2,133,588	2,175,740	2,218,726	2,262,560	2,307,260	2,352,844	2,375,783
2	2,044,907	2,065,173	2,105,974	2,147,580	2,190,009	2,233,276	2,277,398	2,322,392	2,345,034
3	2,017,636	2,037,632	2,077,889	2,118,941	2,160,804	2,203,494	2,247,027	2,291,421	2,313,761
4	1,989,910	2,009,631	2,049,334	2,089,822	2,131,110	2,173,213	2,216,148	2,259,932	2,281,965
5	1,961,753	1,981,195	2,020,336	2,060,251	2,100,955	2,142,462	2,184,790	2,227,954	2,249,675
6	1,933,224	1,952,383	1,990,956	2,030,290	2,070,402	2,111,306	2,153,018	2,195,554	2,216,960
7	1,904,353	1,923,226	1,961,223	1,999,970	2,039,482	2,079,775	2,120,865	2,162,766	2,183,851
8	1,875,295	1,893,880	1,931,296	1,969,452	2,008,362	2,048,040	2,088,503	2,129,764	2,150,528
9	1,846,233	1,864,530	1,901,367	1,938,932	1,977,238	2,016,302	2,056,137	2,096,759	2,117,201
10	1,817,338	1,835,349	1,871,609	1,908,586	1,946,293	1,984,745	2,023,957	2,063,943	2,084,066
11	1,788,756	1,806,483	1,842,173	1,878,568	1,915,682	1,953,530	1,992,125	2,031,482	2,051,288
12	1,760,556	1,778,004	1,813,131	1,848,952	1,885,481	1,922,732	1,960,718	1,999,455	2,018,949
13	1,732,619	1,749,791	1,784,360	1,819,613	1,855,563	1,892,222	1,929,606	1,967,728	1,986,913
14	1,704,698	1,721,592	1,755,605	1,790,290	1,825,660	1,861,729	1,898,510	1,936,018	1,954,893
15	1,676,118	1,692,729	1,726,172	1,760,275	1,795,052	1,830,516	1,866,681	1,903,560	1,922,119
16	1,646,386	1,662,702	1,695,551	1,729,050	1,763,210	1,798,045	1,833,568	1,869,793	1,888,023
17	1,615,182	1,631,190	1,663,416	1,696,280	1,729,792	1,763,967	1,798,817	1,834,356	1,852,240
18	1,582,456	1,598,139	1,629,712	1,661,910	1,694,744	1,728,226	1,762,370	1,797,188	1,814,710
19	1,548,383	1,563,728	1,594,622	1,626,127	1,658,253	1,691,015	1,724,423	1,758,492	1,775,636

C. Sprague Fifth-Difference Formula(with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,096,874	2,117,655	2,159,493	2,202,157	2,245,664	2,290,031	2,335,274	2,381,411	2,404,629
1	2,071,430	2,091,959	2,133,289	2,175,435	2,218,414	2,262,243	2,306,937	2,352,514	2,375,450
2	2,045,171	2,065,440	2,106,246	2,147,858	2,190,292	2,233,565	2,277,693	2,322,692	2,345,337
3	2,018,192	2,038,193	2,078,461	2,119,524	2,161,398	2,204,100	2,247,646	2,292,051	2,314,398
4	1,990,584	2,010,312	2,050,029	2,090,530	2,131,832	2,173,950	2,216,899	2,260,698	2,282,738
5	1,962,442	1,981,891	2,021,046	2,060,975	2,101,693	2,143,215	2,185,558	2,228,737	2,250,466
6	1,933,859	1,953,024	1,991,609	2,030,957	2,071,082	2,111,999	2,153,725	2,196,275	2,217,688
7	1,904,928	1,923,806	1,961,814	2,000,573	2,040,097	2,080,403	2,121,504	2,163,418	2,184,510
8	1,875,742	1,894,331	1,931,757	1,969,921	2,008,840	2,048,528	2,089,000	2,130,272	2,151,041
9	1,846,394	1,864,693	1,901,533	1,939,100	1,977,410	2,016,477	2,056,316	2,096,942	2,117,386
10	1,816,556	1,834,559	1,870,804	1,907,765	1,945,456	1,983,891	2,023,086	2,063,055	2,083,169
11	1,785,900	1,803,599	1,839,232	1,875,569	1,912,624	1,950,411	1,988,944	2,028,239	2,048,013
12	1,756,627	1,774,036	1,809,085	1,844,827	1,881,274	1,918,442	1,956,344	1,994,994	2,014,444
13	1,729,675	1,746,817	1,781,328	1,816,521	1,852,410	1,889,007	1,926,327	1,964,385	1,983,537
14	1,703,872	1,720,758	1,754,754	1,789,422	1,824,775	1,860,826	1,897,590	1,935,080	1,953,946
15	1,677,516	1,694,141	1,727,611	1,761,743	1,796,549	1,832,043	1,868,237	1,905,147	1,923,722
16	1,651,438	1,667,805	1,700,755	1,734,356	1,768,621	1,803,563	1,839,195	1,875,531	1,893,816
17	1,622,046	1,638,122	1,670,485	1,703,488	1,737,143	1,771,463	1,806,462	1,842,151	1,860,111
18	1,587,538	1,603,271	1,634,946	1,667,247	1,700,187	1,733,776	1,768,030	1,802,960	1,820,538
19	1,549,796	1,565,155	1,596,077	1,627,610	1,659,766	1,692,557	1,725,997	1,760,096	1,777,256

Scenario 4: Getting the difference in the age structure (2000 census and 2010 census); dividing the difference by 10 to get the yearly increment. Computing the yearly age structure by adding the yearly increment. Applying the computed yearly age structure to the computed yearly total population.

A. Beers Six Term Ordinary Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,240,759	2,242,935	2,247,049	2,250,451	2,253,109	2,254,994	2,256,075	2,256,318	2,256,300
1	2,209,719	2,211,488	2,214,781	2,217,340	2,219,137	2,220,139	2,220,315	2,219,630	2,219,145
2	2,178,121	2,179,861	2,183,100	2,185,617	2,187,381	2,188,361	2,188,526	2,187,844	2,187,362
3	2,145,417	2,147,499	2,151,436	2,154,691	2,157,234	2,159,037	2,160,069	2,160,299	2,160,281
4	2,111,058	2,113,845	2,119,216	2,123,973	2,128,092	2,131,544	2,134,301	2,136,336	2,137,233
5	2,074,444	2,078,295	2,085,824	2,092,840	2,099,318	2,105,236	2,110,569	2,115,290	2,117,549
6	2,035,028	2,040,291	2,050,689	2,060,701	2,070,309	2,079,492	2,088,229	2,096,501	2,100,559
7	1,992,414	1,999,423	2,013,363	2,027,074	2,040,541	2,053,749	2,066,682	2,079,325	2,085,598
8	1,946,468	1,955,520	1,973,610	1,991,651	2,009,635	2,027,551	2,045,392	2,063,146	2,072,008
9	1,897,825	1,909,140	1,931,820	1,954,651	1,977,630	2,000,754	2,024,020	2,047,424	2,059,150
10	1,847,948	1,861,610	1,889,054	1,916,856	1,945,018	1,973,546	2,002,441	2,031,708	2,046,403
11	1,799,020	1,814,938	1,846,960	1,879,539	1,912,685	1,946,406	1,980,714	2,015,617	2,033,168
12	1,753,533	1,771,420	1,807,438	1,844,187	1,881,683	1,919,941	1,958,976	1,998,805	2,018,851
13	1,713,103	1,732,530	1,771,673	1,811,686	1,852,589	1,894,401	1,937,142	1,980,833	2,002,836
14	1,676,771	1,697,325	1,738,759	1,781,167	1,824,572	1,868,996	1,914,464	1,961,000	1,984,445
15	1,641,389	1,663,035	1,706,685	1,751,411	1,797,238	1,844,192	1,892,300	1,941,589	1,966,430
16	1,606,209	1,628,741	1,674,192	1,720,804	1,768,603	1,817,620	1,867,884	1,919,423	1,945,406
17	1,573,508	1,596,134	1,641,781	1,688,608	1,736,644	1,785,920	1,836,464	1,888,309	1,914,448
18	1,543,540	1,565,270	1,609,105	1,654,060	1,700,164	1,747,444	1,795,929	1,845,647	1,870,712
19	1,515,565	1,535,685	1,576,261	1,617,840	1,660,448	1,704,107	1,748,843	1,794,682	1,817,785

B. Beers Six Term Modified Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,239,193	2,240,665	2,243,352	2,245,270	2,246,389	2,246,676	2,246,097	2,244,618	2,243,729
1	2,210,652	2,212,161	2,214,929	2,216,942	2,218,170	2,218,582	2,218,144	2,216,823	2,216,015
2	2,179,563	2,181,392	2,184,811	2,187,514	2,189,471	2,190,652	2,191,024	2,190,556	2,190,182
3	2,145,926	2,148,356	2,152,999	2,156,986	2,160,291	2,162,885	2,164,737	2,165,819	2,166,232
4	2,109,740	2,113,054	2,119,492	2,125,359	2,130,631	2,135,281	2,139,284	2,142,611	2,144,162
5	2,071,059	2,075,534	2,084,332	2,092,667	2,100,518	2,107,862	2,114,677	2,120,938	2,123,976
6	2,030,030	2,035,934	2,047,633	2,058,999	2,070,015	2,080,663	2,090,923	2,100,777	2,105,636
7	1,986,885	1,994,458	2,009,543	2,024,445	2,039,152	2,053,650	2,067,925	2,081,963	2,088,942
8	1,942,067	1,951,510	1,970,390	1,989,254	2,008,095	2,026,904	2,045,672	2,064,391	2,073,742
9	1,896,250	1,907,699	1,930,650	1,953,765	1,977,038	2,000,469	2,024,054	2,047,791	2,059,684
10	1,850,148	1,863,667	1,890,819	1,918,316	1,946,162	1,974,359	2,002,911	2,031,821	2,046,335
11	1,804,606	1,820,163	1,851,453	1,883,269	1,915,619	1,948,512	1,981,958	2,015,964	2,033,061
12	1,760,491	1,777,948	1,813,093	1,848,933	1,885,481	1,922,752	1,960,760	1,999,519	2,019,023
13	1,718,444	1,737,556	1,776,061	1,815,409	1,855,619	1,896,709	1,938,699	1,981,607	2,003,214
14	1,678,848	1,699,282	1,740,471	1,782,624	1,825,763	1,869,911	1,915,091	1,961,326	1,984,619
15	1,642,167	1,663,427	1,706,294	1,750,207	1,795,188	1,841,263	1,888,459	1,936,800	1,961,162
16	1,608,220	1,629,763	1,673,207	1,717,731	1,763,362	1,810,126	1,858,049	1,907,159	1,931,912
17	1,576,186	1,597,533	1,640,585	1,684,715	1,729,948	1,776,311	1,823,831	1,872,535	1,897,084
18	1,545,734	1,566,445	1,608,213	1,651,020	1,694,890	1,739,850	1,785,925	1,833,141	1,856,939
19	1,516,434	1,536,154	1,575,917	1,616,652	1,658,381	1,701,128	1,744,917	1,789,772	1,812,377

C. Sprague Fifth-Difference Formula (with a 3-year moving average)									
Single Years	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	2,226,173	2,229,251	2,235,194	2,240,502	2,245,147	2,249,102	2,252,336	2,254,821	2,255,938
1	2,207,400	2,209,312	2,212,895	2,215,759	2,217,871	2,219,202	2,219,720	2,219,392	2,219,088
2	2,182,450	2,183,923	2,186,619	2,188,570	2,189,744	2,190,110	2,189,636	2,188,289	2,187,469
3	2,152,066	2,153,737	2,156,840	2,159,226	2,160,863	2,161,723	2,161,773	2,160,982	2,160,446
4	2,116,985	2,119,406	2,124,033	2,128,016	2,131,327	2,133,938	2,135,821	2,136,944	2,137,380
5	2,077,949	2,081,583	2,088,673	2,095,230	2,101,231	2,106,652	2,111,467	2,115,650	2,117,636
6	2,035,698	2,040,920	2,051,233	2,061,158	2,070,675	2,079,762	2,088,401	2,096,569	2,100,575
7	1,990,971	1,998,069	2,012,190	2,026,090	2,039,754	2,053,166	2,066,313	2,079,177	2,085,562
8	1,944,509	1,953,683	1,972,018	1,990,315	2,008,566	2,026,760	2,044,890	2,062,945	2,071,960
9	1,897,052	1,908,415	1,931,191	1,954,124	1,977,208	2,000,442	2,023,822	2,047,345	2,059,130
10	1,848,515	1,862,142	1,889,515	1,917,242	1,945,328	1,973,775	2,002,586	2,031,766	2,046,417
11	1,798,814	1,814,745	1,846,793	1,879,399	1,912,572	1,946,323	1,980,661	2,015,596	2,033,163
12	1,752,811	1,770,743	1,806,851	1,843,695	1,881,289	1,919,650	1,958,791	1,998,730	2,018,833
13	1,712,897	1,732,336	1,771,505	1,811,546	1,852,477	1,894,318	1,937,089	1,980,812	2,002,831
14	1,677,338	1,697,857	1,739,219	1,781,553	1,824,881	1,869,225	1,914,610	1,961,058	1,984,459
15	1,641,608	1,663,149	1,706,588	1,751,094	1,796,692	1,843,409	1,891,270	1,940,303	1,965,015
16	1,606,129	1,628,699	1,674,228	1,720,919	1,768,802	1,817,905	1,868,258	1,919,891	1,945,921
17	1,573,230	1,595,989	1,641,905	1,689,011	1,737,339	1,786,916	1,837,774	1,889,945	1,916,249
18	1,543,460	1,565,229	1,609,140	1,654,176	1,700,363	1,747,729	1,796,303	1,846,115	1,871,226
19	1,515,783	1,535,799	1,576,164	1,617,523	1,659,902	1,703,324	1,747,814	1,793,396	1,816,370